Dr. B.C. Roy College of Pharmacy and Allied Health Sciences



<sup>Ph.</sup> e-mail : (0343) 243 2678/79

: bcrcp\_dgp@yahoo.co.in

: www.bcrcp.ac.in

Approved by PCI & Affiliated to MAKAUT, WB and WBSCT&VE&SD Dr. Meghnad Saha Sarani, Bidhannagar, Durgapur-713206, West Bengal (India)

# Dr. B. C. Roy College of Pharmacy and Allied Health Sciences <u>Durgapur - 713206</u>

M. Pharm. (Pharmaceutics) 2nd Year 4th Semester' 2023-2024

SLNO	UNIV. ROLL NO.	NAME	TITLES
1	18920322001	ANUPAM BERA	FORMULATION AND CHARACTERIZATION OF ELLAGIC ACID LOADED SILVER NANOPARTICLES
2	18920322002	AKASH MONDAL	CAFFEIC ACID-g-GUAR GUM/FISH COLLAGEN BASED HYDROGELS AS WOUND DRESSINGS
3	18920322003	PRASIT ROY	Preparation, Characterization and In-Vitro Evaluation of Microspheric Delivery of Model Anti-Hypertensive Drug using Polymers from Natural Origin
4	18920322004	SUMON PAUL	Design, development and characterization of carboxymethyl pullulan-g-tannic acid/gelatin based sponges as hemostatic dressings
5	18920322005	SUMAN KONAR	Formulation, optimization and characterization of Albendazole loaded liposomes for targeting parenchymal brain cysticercosis
6	18920322006	PANKAJ SAHA	ENHANCEMENT OF SOLUBILITY AND DISSOLUTION OF BCS CLASS IV DRUG USING COCRYSTALLIZATION APPROACH
7	18920322007	SAYANTAN NAG	Design, development and characterization of Collagen-Guar gum based Scaffolds in tissur engineering
8	18920322008	ANUSKA CHATTERJEE	FORMULATION AND CHARACTERIZATION OF NICOTINAMIDE AND OFLOXACIN LOADED FILMS FOR WOUND HEALING
9	18920322009	ANANYA DEY	DEVELOPMENT AND EVALUATION OF MICROEMULSION GEL FORMULATION Submited by CONTAINING BOSWELLIA SERRATA EXTRACT
10	18920322010	SANJOY KUMAR BASU	FORMULATION AND EVALUATION OF METFORMIN HYDROCHLORIDE LOADED FLOATING MICROSPHERE CONTAINING PERMEATION ENHANCERS
11	18920322011	PARTHA PRATIM BEZ	FORMULATION DEVELOPMENT STUDIES ON AN OPHTHALMIC IN-SITU GEL
12	18920322012	PIYASA CHAKRABORTY	FORMULATION AND CHARACTERIZATION OF GEL BASED COPPER NANOPARTICLES OF ELLAGIC ACID
13	18920322013	ABHISHEK GHOSH	Formulation Development Studies on Oral Wafers of A Model Antidepressant Drug
14	18920322014	TUFAN KOLEY	IMPROVEMENT OF THE PHARMACOKINETIC PROFILE OF ANTIFUNGAL AGENT USING NANO-LIPOIDAL TECHNOLOGY
15	18920322015	ARIJIT SAU	IMPROVEMENT OF THE PHARMACOKINETIC PROFILE OF CURCUMIN LOADED NANOCOCHLEATES USING NANO-LIPOIDAL TECHNOLOGY



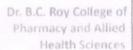
Prof. (Dr.) Samir Kumar Samanta M. Pharm., Ph.D (J.U.)

Principal

Dr. B. C. Roy College of Pharmacy & AHS

Durgapur, West Bengal-713206

ACCREDITED BY NAAC (B++) & NBA (FOR UG PHARMACY) [2023-2026]





Ph. e-mail : (0343) 243 2678/79

: bcrcp\_dgp@yahoo.co.in

: www.bcrcp.ac.in

Approved by PCI & Affiliated to MAKAUT, WB and WBSCT&VE&SD Dr. Meghnad Saha Sarani, Bidhannagar, Durgapur-713206, West Bengal (India)

# Dr. B. C. Roy College of Pharmacy and Allied Health Sciences Durgapur - 713206

M. Pharm. (Pharmacology) 2nd Year 4th Semester' 2023-2024

SL NO	UNIV. ROLL NO.	NAME	TITLE
1	18920222001	RAЛВ DE	Effects of Antidiabetic Isolate of Hydro alcoholic extract of Cuscuta reflexa (HAECR) in HFD-STZ Rats on its Antiobesity and Secondary Diabetic Complications
2	18920222002	SUVOJIT MONDAL	EXPLORATION OF PROARRYTHMOGENICITY OF GLIMEPIRIDE IN HYPOKALEMIA AND ARRHYTHMOGEN PROVOKED RAT MODEL
3	18920222003	SNEHA GHOSH	Studies on the Neurobehavioral Effects and Wound Healing Property of Human Placental Extract on Traumatic Brain Injury Using Animal Model of Zebra Fish
4	18920222004	TANMOY DAS	Phytochemical Investigation and Pharmacological Evaluation of Purified roots of Plumbago zeylanica in experimentally-Induced Arthritis in Rats
5	18920222005	SANJUKTA DAS	EXPLORING THE SYNTHESIS, CHARACTERIZATION AND BIOLOGICAL INTERACTIONS OF OUERCETIN-COOPPER NANOPARTICLE COMPLEXES FOR ENHANCED ANTIBACTERIAL AND DNA BINDING APPLICATIONS
6	18920222006	DISHA DAS	INVESTIGATIONS ON THE EFFECT OF HUMAN PLACENTAL EXTRACT IN TREATMENT-RESISTANT DEPRESSION
7	18920222007	ARINDAM SAHOO	EVALUATION OF ANTI-ULCER ACTIVITY OF BARLERIA LUPULINA LEAVES
8	18920222008	Saikat Bhattacharya	DEVELOPMENT OF NOVEL COPPER NANOPARTICLE COMPLEXES WITH CIPROFLOXACIN AND VITAMIN FOR ENHANCED ANTIBACTERIAL EFFICACY
9	18920222009	SANDIPAN SAU	STUDIES ON THE ROLE OF DRIED ETHANOLIC EXTRACT OF AGARICUS BISPORUS IN THE TREATMENT OP DEPRESSION IN MICE
10	18920222010	PALLABI PRADHAN	Effects of Cuscuta reflexa Roxb as aldose reductase inhibitor in Delaying Diabetic Cataract
11	18920222011	TAMAL PAL	An Investigation on the Therapeutic Potential of Purified Roots of Plumbago zeylanica in an Experimental Rat Model of Hemorrhoids
12	18920222012	AYAN MAHATA	Immobilization of Plastic Degrading Microorganism on Polymeric Nanoparticle for Efficient Plastic Degradation and Virulence Study of Microorganism on Animal Model
13	18920222013	RIKUROY	preclinical studies of antidepressant effects of hibiscus rosa sinensis extract on swiss albino mice
14	18920222014	NURUL HASSAN MONDAL	Evaluation of the Improvement of Peripheral Neuropathy Using the Hydroalcoholic Extract of Cucurbita maxima Seeds in STZ Induced Diabetic Rats
15	18920222015	PAYEL GHOSH	Development and Pharmacological Evaluation of polyherbal formulation (tablet) on experimentally-induced hemorrhoids



Prof. (Dr.) Samir Kumar Samanta M. Pharm., Ph.D (J.U.) Principal Dr. B. C. Roy College of Pharmacy & AHS Durgapur, West Bengal-713206



Ph. e-mail : (0343) 243 2678/79

: bcrcp\_dgp@yahoo.co.in

: www.bcrcp.ac.in

Approved by PCI & Affiliated to MAKAUT, WB and WBSCT&VE&SD Dr. Meghnad Saha Sarani, Bidhannagar, Durgapur-713206, West Bengal (India)

#### M.PHARM 2ND YEAR 4TH SEMESTER, 2023-24

# DR. B. C. ROY COLLEGE OF PHARMACY AND ALLIED HEALTH SCIENCES DURGAPUR - 713206 M. PHARM. (PHARMACEUTICAL ANALYSIS) 2ND YEAR 4TH SEMESTER' 2023-2024

SL NO	UNIV. ROLL NO.	NAME	TITLES
1	18920722001		SYNTHESIS AND CHARACTERIZATION OF NOVEL CINNAMIC
		SRIJITA	ACID AMIDE DERIVATIVES ACTING AS POTENTIAL ANI-
		CHATTERJEE	DIABETIC AGENTS
	18920722002		SYNTHESIS AND CHARACTERIZATION OF DIFFERENT AMINO
2			ACID DERIVATIVES TO BE EVALUATED AGAINST NON-
		ARUP KOLEY	ALCOHOLIC FATTY LIVER DISEASE
3	18920722003	SUVROJYOTI	SYNTHESIS AND CHARACTERIZATION OF CINNAMIC ACID
3		GHOSH ROY	AMIDE DERIVATIVES AS POTENTIAL ANTI-CANCER AGENT
4	18920722004		SYNTHESIS OF COUMARIN ANALOGUES TO BE TESTED AS
4		TANDRIKA ROY	ANTIMICROBIALS
-	400007333005		SYNTHESIS OF DIFFERENT COUMARINS TO BE EVALUATED
5	18920722005	SOUVIK BHANDARY	AGAINST PROSTATE CANCER
-			SYNTHESIS OF CIPROFLOXACIN/ CINNAMIC ACID
6	18920722006		CONJUGATES, THEIR CHARACTERIZATION, AND ANALYTICAL
		SUSMITA AFTAB	METHOD DEVELOPMENT BY RP-HPLC
	18920722007		FORCE DEGRADATION STUDY OF QUETIAPINE AND ITS
7			MARKETED TABLET BY ANALYTICAL AND CHEMICAL
		DIPANWITA BERA	CHARACTERIZATIONS
8	18920722008		DESIGN, SYNTHESIS, AND ANTI-MICROBIAL EVALUATION OF
8		SUSMITA MALLICK	CERTAIN BACTERIAL PEPTIDYL T-RNA HYDROLASE.
	18920722009		DESIGN, SYNTHESIS AND CHARACTERIZATION OF DIFFERENT
9		CHANCHAL	COUMARIN DERIVATIVES TO BE EVALUATED AGAINST
		MONDAL	BREAST CANCER
	18920722011		IMMOBILIZATION OF PLASTIC DEGRADING MIEROORGANISM
10			ON POLYMERIC NANOPARTICLE FOR EFFICIENT PLASTIC
		ARIJIT PATRA	DEGRADATION AND BYPRODUCT ANALYSIS
	18920722012		BIOANALYTICAL PROFILING OF BRAIN BIOAMINES AND
11			ASSOCIATED PHYTOCONSTITUENTS OF THERAPEUTIC
11	18920722012		DOSAGE OF CLITORIA TERNATEA IN PRECLINICAL MODELS OF
		PYEORIMA MAJI	MICE
	18920722013		SYNTHESIS OF CIPROFLOXACIN/CINNAMIC ACID
12			CONJUGATES, THEIR CHARACTERIZATION AND ANALYTICAL
		SATYAJIT ROY	METHOD DEVELOPMENT BY RP-HPLC
	18920722014		SYNTHESIS, CHARACTERIZATION AND ASSESSMENT OF
13			ANTIMICROBIAL ACTIVITY OF NOVEL CHARGE TRANSFER
	10920/22014		COMPLEXES OF 3,5- DINITROSALICYLIC ACID WITH
		MOLOY ROY	ETHYLENEDIAMINE



Prof. (Dr.) Sabrii Kumar Samanta M. Pharm., Ph.D (J.U.) Principal

ACCREDITED BY NAAC (B++) & NBA (FOR UG PHARMACY) [2023 2027, West Bengal-713206

Dr. B.C. Roy College of Pharmacy and Allied Health Sciences



Ph. e-mail : (0343) 243 2678/79

: bcrcp\_dgp@yahoo.co.in

: www.bcrcp.ac.in

Approved by PCI & Affiliated to MAKAUT, WB and WBSCT&VE&SD Dr. Meghnad Saha Sarani, Bidhannagar, Durgapur-713206, West Bengal (India)

# <u>Dr. B. C. Roy College of Pharmacy and Allied Health Sciences</u> <u>Durgapur - 713206</u>

M. Pharm. (Industrial Pharmacy) 2nd Year 4th Semester' 2023-2024

SLNO	UNIV. ROLL NO.	NAME	TITLES
1	18921822001	ADARSHA DUTTA	EXTRACTION AND CHARACTERIZATION OF NATURAL POLYMER AND ITS IMPLICATION AS RELEASE RETARDANT FOR MICROSPHERIC DRUG DELIVERY
2	18921822002	JISHA BARIK	EVALUATE THE EFFECT OF DIFFERENT CONCENTRATION OF MAGNESIUM STEARATE ON INPROCESS PARAMETERS AND DISSOLUTION OF PARACETAMOL 500MG TABLETS.
3	18921822003 DIBYENDU KUNDU		DEVELOPMENT AND EVALUATION OF ITRACONAZOLE LOADED MICROEMULSION GEL FORMULATION
4	18921822004 SOMRITA SAHA		SYNTHESIS AND CHARACTERIZATION OF LOW- METHOXY PECTIN/TAMARIND GUM-g-CAFFEIC ACID BASED FILMS AS FOOD PACKAGING MATERIALS
5	18921822005	NABYENDU MANDAL	DESIGN AND EVALUATION OF SLOW RELEASED GASTRORETENTIVE MICROSPHERES
6	18921822006 PIU GHOSH		PREPARATION AND EVALUATION OF FILMS FOR WOUND HEALING
7	18921822007 KRISHNENDU SARKAR		EVALUATE THE EFFECT OF GRANULES TO FINES RATIO ON IN-PROCESS PARAMETERS AND DISSOLUTION OF PARACETAMOL (500MG) TABLET
8	18921822008 JAGANNATH PANJA		FORMULATION DEVELOPMENT & CHARACTERIZATION OF NARINGIN LOADED POLYCAPROLACTONE NANOPARTICLES
9	18921822009	TANMOY CHOWDHURY	IMPROVEMENT OF BIOPHARMACEUTICAL PROPERTIES OF MODEL ANTI-HYPERTENSIVE DRUG BY SOLID DISPERSION TECHNIQUE



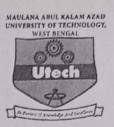
Prof. (Dr.) Samir Kumar Samanta M. Pharm., Ph.D (J.U.) Principal

Dr. B. C. Roy College of Pharmacy & AHS

ACCREDITED BY NAAC (B++) & NBA (FOR UG PHARMACY) [2029/2026] West Bengal-713206



# Project Report on



# Design, development and characterization of carboxymethyl pullulan-g-tannic acid/gelatin based sponges as hemostatic dressings

Submitted by

#### **SUMON PAUL**

University Regn. No. - 221892310037 Roll No. - 18920322004

Under the guidance of

#### DR. HRIDAY BERA

Associate Professor, BCRCP

In partial fulfilment of the Requirement for the Degree of Master of Pharmacy in Pharmaceutics

Submitted to

Maulana Abul Kalam Azad University of Technology West Bengal

Dr. B. C. Roy College of Pharmacy and Allied Health Sciences Durgapur 713206

Academic Year: 2023 - 2024



Prof. (Dr.) Sanar Kumar Samanta M. Pharm., Ph.D (J.U.) Principal Dr. B. C. Roy College of Fnarmacy & AHS Durgapur, West Bengal-713206

I hereby declare that the Project entitled "Design, development and characterization of carboxymethyl pullulan-g-tannic acid/gelatin based sponges as haemostatic dressings" in partial fulfilment of the requirement for the award of Master of Pharmacy submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is an authentic record of bona fide work carried out by me under the guidance of Dr. Hriday Bera.

The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University / Institution.

Sumon Paul Signature

Name of Candidate: SUMON PAUL

Roll No: 18920322004

Date: 06,06,2024

Place: DURGAPUR

amir Kumar Samanta M. Pharm., Ph.D (J.U.) Principal Dr. B. C. Roy College of Pharmacy & AHS Durgapur, West Bengal-713206

This is to certify that the Project entitled "Design, development and characterization of carboxymethyl pullulan-g-tannic acid/gelatin based sponges as haemostatic dressings" by Sumon Paul in partial fulfilment for the MASTER OF PHARMACY (PHARMACEUTICS) under MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither this thesis nor any part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examination MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY for assessment.

Signature of Guide

Name of Guide: Dr. Hriday Bera

Place: Durgapur Date: 06.06.2024 Signature of the Externa Examiner

Place: Durgapur

Date:

SAMIR KUMAR SAMANTA

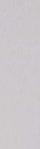
(PRINCIPAL)

Prof. (Dr.) Samir Kumar Samanta M. Pharm., Ph.D (J.U.) Principal

Place: Durgapur

Date:

Dr. B. C. Roy College of Pharmacy & AHS Durgapur, West Bengal-713206



Pharm., Ph.D (J.U.) ar Fharmacy & AHS pur, West Bengal-713206

Kumar Samanta







# **Project Report on**

# Synthesis of Ciprofloxacin/cinnamic acid conjugates, theircharacterization and analytical method development by RP-HPLC

Submitted by Susmita Aftab

University Regn. No.: 221892310020

Roll No.: 18920722006

Under the guidance of

Dr. Ujjwal Sahoo Associate professor, **BCRCP** 

In partial fulfilment of the Requirement for the Degree of Master of Pharmacy in Pharmaceutical Analysis Submitted to

Maulana Abul Kalam Azad University of **TechnologyWest Bengal** 

Dr. B. C. Roy College of Pharmacy and Allied Health Sciences

Durgapur-713206

chilemic Year: 2023-2024

M. Pharm., Ph.D (J.U.) Durgapur, West Sengal-713205



I hereby declare that the Project entitled "Synthesis of ciprofloxacin/ cinnamic acid conjugates, there characterization and analytical method development by RP-HPLC protocol" in partial fulfilment of the requirement for the award of Master of Pharmacy submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is an authentic record of bona fide work carried out by me under the guidance of Dr. Ujjwal Sahoo.

The matter embodied in this Project has not been submitted for the award of any other degree ordiploma to any University/Institution.

Signature Sumitations

Name of Candidate: SUSMITA AFTAB

Roll No: 18920722006

Date 04.06.2024

Place BURGAPUR



This is to certify that the Project entitled "Synthesis of ciprofloxacin/ cinnamic acid conjugates, there characterization and analytical method development by RP-HPLC protocol" by Susmita Aftab impartial fulfilment for the MASTER OF PHARMACY (PHARMACEUTICAL ANALYSIS) under MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither this thesis nor any part of it has been submitted for any other academic award any where before. The thesis is forwarded to Controller of Examination MAULANA ABUL KALAM AZAD UNIVERSITY OFTECHNOLOGY for assessment.

A6/2029

Signature of Guide

Name of Guide: Dr. Ujjwal Sahoo

Place: Dungapur

Date: 04.06.2024

Thrubopyokh

Signature of the External Examiner

Place:

Date: 05/06/24

Prof. Samir Kumar Samanta (Principal)

Place: Durgapur

Date: 04.06.2024

Prof. (Dr.) Samir Kumar Samanta M. Pharm., Ph.D (J.U.) Principal

Dr. B. C. Roy College of Pharmacy & AHS Durgapur, West Bengal-717206







## Design, Synthesis, and Anti-microbial Evaluation of certain bacterial peptidyl t-RNA hydrolase inhibitors

Submitted by SUSMITA MALLICK

University Reg. No. -221892310021 Roll No. -18920722008

> Under the guidance of MR. SHOBHAN BOSE Assistant Professor, BCRCP

In partial fulfillment of the Requirement for the Degree of Master of Pharmacy in Pharmaceutical Analysis

Submitted to

Maulana Abul Kalam Azad University of Technology West Bengal

Dr. B. C. Roy College of Pharmacy and Allied Health Sciences Durgapur 713206

> 2022 - 2023 AcademicY

M. Pharm., Ph.O (J.U.) Principal
Principal
Principal
Principal
AHS Durgapur, West Ben 3al-713206



I am hereby declared that the Project entitled "Design, Synthesis, and Antimicrobial Evaluation of certain bacterial peptidyl t-RNA Hydrolase. In partial fulfillment of the requirement for the award of Master of Pharmacy submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is an authentic record of bona fide work carried out by me under the guidance of Mr. Shobhan Bose.

The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University / Institution.

Signature Mallick

Name of Candidate: SUSHITA MALLICK

Roll No: 18980722008

Date: 04/06/2024,

Place: Duxgafowt,



Durgaput, West Bengal-71320

This is to certify that the Project entitled "Design, Synthesis, and Anti-microbial Evaluation of certain bacterial peptidyl t-RNA Hydrolasex by Susmita Mallick in partial fulfilment for the MASTER OF PHARMACY (PHARMACEUTICAL ANALYSIS) under MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither his/her thesis nor any part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examination MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY for assessment.

Signature of Guide

Name of Guide: Shothen Bose

Date: 416124

Place: DurgeDW

PROF (DR.) SAMIR KR. SAMANTA

(PRINCIPAL)

Date: 04 06 2024

Prof. (Dr.) Samir Kumar Samanta M. Pharm., Ph.D (J.U.) Principal

Dr. B. C. Roy College of Pharmacy & AHS Durgapur, West Bengal-713206

Signature

Name of External Examiner:

Date:

05/06/24

Place:



Dr. B. C. Roy College of Pharmacy 8





#### A Project Report on

# EXPLORATION OF PROARRYTHMOGENICITY OF GLIMEPIRIDE IN HYPOKALEMIA AND ARRHYTHMOGEN PROVOKED RAT MODEL.

Submitted by SUVOJIT MONDAL

University Regn. No. -221892310051 OF 2022-2023 Roll No. -18920222002

Under the guidance /Joint guidance and supervision of

Internal guide: PROF.DR. SAMIR KUMAR SAMANTA

PRINCIPAL of

Dr. B. C. Roy College of pharmacy and Allied Health Sciences

External guide: PROF. SANMOY KARMAKAR

Department of Pharmaceutical technology, Jadavpur University, Kolkata, West Bengal

In partial fulfilment of the Requirement for the Degree of Master of Pharmacy in Pharmacology

Submitted to

Maulana Abul Kalam Azad University of Technology, West Bengal

Dr. B. C. Roy College of Pharmacy and Allied Health Sciences
Durgapur, 713206

2013 mic Year: 2023 – 2024



I hereby declare that the Project entitled "Exploration of Proarrythmogenicity of Glimepiride in hypokalemia and arrhythmogen provoked rat model" in partial fulfilment of the requirement for the award of Master of Pharmacy submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is an authentic record of bona fide work carried out by me under the guidance of PROF.DR. SAMIR KUMAR SAMANTA & PROF. SANMOY KARMAKAR

The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University / Institution.

Suvojit Mindal Signature

Name of Candidate: SUVOJIT MONDAL

Roll No: 18920222002

Date: 07/06/24

Place: Duryapur.

Suvojit Mond

This is to certify that the Project entitled "Exploration of Proarrythmogenicity of Glimepiride in hypokalemia and arrhythmogen provoked rat model" by SUVOJIT MONDAL in partial fulfilment for the MASTER OF PHARMACY IN PHARMACOLOGY under MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither this thesis nor any part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examination MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY for assessment.

Signature of Guide

Name of Guide: PROF. SAMIR KUMAR SAMANTA.

Place: Dungapur.

Date: 07.06.24

Prof. (Dr.) Samir Kumar Samanta M. Pharm., Ph.D (J.U.) Principal Dr. B. C. Roy College of Pharmacy & AHS Durgapur, West Bengal-713206

PROFESSOR (PAR Guideto PROF xicology) Dept of Pharmar Mark Arinology JADAVPUR UNIVER. Y, Kolkata - 32

Place:

Date: 05. 06. 24

Signature of the External

Examiner.

Place: DUNGAPUN

Date: 07.06.24

AMIR KUMAR SAMANTA

(PRINCIPAL)

Place: burgepur. Date: 67.00.24

Prof. (Dr.) Samir Kumar Samanta M. Pharm., Ph.D (J.U.) Principal

Dr. B. C. Roy College of Pharmacy & AHS Durgapur, West Bengal-713206



Project Report On



## SYNTHESIS, CHARACTERIZATION AND **EVALUATION OF PROTEIN FIBRILLATION INHIBITORYACTIVITY OF** CINNAMIC ACID AMIDE DERIVATIVES

Submitted by

## **SUVROJYOTI GHOSH ROY**

University Regn. No. - 221892310021 Roll No. -18920722003

Under the guidance of

Dr. Manabendra Dhua

Assistant Professor, Department of Pharmaceutical Chemistry

In partial fulfilment of the Requirement for the Degree of Master of Pharmacy in Pharmaceutical Analysis

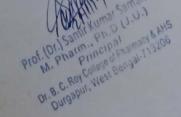
Submitted to

Maulana Abul Kalam Azad University of Technology West Bengal

Dr. B. C. Roy College of Pharmacy and Allied Health Sciences

Durgapur 713206

Academic Year: 2023 - 2022





I hereby declare that the Project entitled "Synthesis, Characterization and Evaluation of Protein Fibrillation Inhibitory activity of Cinnamic Acid Amide Derivatives" in partial fulfilment of the requirement for the award of Master of Pharmacy submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is an authentic record of bona fide work carried out by me under the guidance of Dr. Manabendra Dhua.

The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University / Institution.

Signature Surrojyoti Ghosh Roy

Name of Candidate: SUVROJYOTI GHOSH ROY

Roll No: 18920722003

Date 04.06.2024

Place DURGAPUR



This is to certify that the Project entitled "Synthesis, Characterization and Evaluation of Protein Fibrillation Inhibitory activity of Cinnamic Acid Amide Derivatives" by Suvrojyoti Ghosh Roy in partial fulfilment for the Master of Pharmacy (PHARMACEUTICAL ANALYSIS) under MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither this thesis nor any part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examination MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY for assessment.

Allow or othorn

Signature of Guide

Name of Guide: Dr. Manabendra Dhua

Date:

Place:

PROF (DR.) SAMIR KR. SAMANTA

(PRINCIPAL)

Date:

Prof. (Dr.) Samir Kumar Samanta M. Pharm., Ph.D (J.U.) Principal

Place:

Dr. B. C. Roy College of Pharmacy & AHS Durgapur, West Bengal-713206

Thrulo pott.

Name of External Examiner:

Date:

05/06/24

Place







Project Report on

An Investigation on the Therapeutic Potential of Purified Roots of Plumbago zeylanica in an **Experimental Rat Model of Hemorrhoids** 

> Submitted by TAMAL PAL University Regn. No. -221892310052 Roll No. - 18920222011

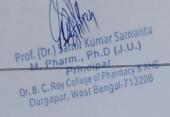
Under the guidance of Dr. YADU NANDAN DEY Associate Professor, BCRCP

In partial fulfilment of the Requirement for the Degree of Master of Pharmacy in Pharmacology

Submitted to Maulana Abul Kalam Azad University of Technology West Bengal

Dr. B. C. Roy College of Pharmacy and Allied Health Sciences Durgapur 713206

Academic Year: 2023 - 2024



I hereby declare that the Project entitled "An Investigation on the Therapeutic Potential of Purified Roots of Plumbago zeylanica in an Experimental Rat Model of Hemorrhoids" in partial fulfilment of the requirement for the award of Master of Pharmacy submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is an authentic record of bona fide work carried out by me under the guidance of DR. YADU NANDAN DEY.

The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University / Institution.

Tamal Pal

Signature

Name of Candidate: TAMAL PAL

Roll No: 18920222011

Date: 06.06.2024

Place: Durgapur

Dr. B. C. Roy College of Pharmacy and ABS 0 2023-24

This is to certify that the Project entitled "An Investigation on the Therapeutic Potential of Purified Roots of Plumbago zeylanica in an Experimental Rat Model of Hemorrhoids" by TAMAL PAL in partial fulfilment for the MASTER OF PHARMACY (PHARMACOLOGY) under MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither this thesis nor any part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examination MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY for assessment.

Signature of Guide

Name of Guide: Dr. Yadu Nandan Dey

Yadw Mandan Duy

Date: 06-06-2024

Place: Durgapur

PROF SAMIR KUMAR SAMANTA

(PRINCIPAL)

Date:

Place: Durgapur

Prof. (Dr.) Samir Kumar Samanta M. Pharm., Ph.D (J.U.) Principal

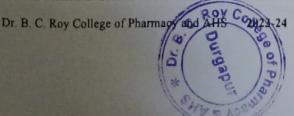
Dr. B. C. Roy College of Pharmacy & AHS Durgapur, West Bengal-713206

Name of the External Examiner:

Date:

Place: Durgapur





Dr. B. C. Roy College of Pharmacy & AHS Durgapur, West Bengal-713200





Project Report on

An Investigation on the Therapeutic Potential of Purified Roots of Plumbago zeylanica in an **Experimental Rat Model of Hemorrhoids** 

> Submitted by TAMAL PAL University Regn. No. -221892310052 Roll No. - 18920222011

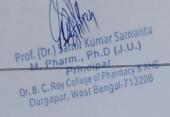
Under the guidance of Dr. YADU NANDAN DEY Associate Professor, BCRCP

In partial fulfilment of the Requirement for the Degree of Master of Pharmacy in Pharmacology

Submitted to Maulana Abul Kalam Azad University of Technology West Bengal

Dr. B. C. Roy College of Pharmacy and Allied Health Sciences Durgapur 713206

Academic Year: 2023 - 2024



I hereby declare that the Project entitled "An Investigation on the Therapeutic Potential of Purified Roots of Plumbago zeylanica in an Experimental Rat Model of Hemorrhoids" in partial fulfilment of the requirement for the award of Master of Pharmacy submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is an authentic record of bona fide work carried out by me under the guidance of DR. YADU NANDAN DEY.

The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University / Institution.

Tamal Pal

Signature

Name of Candidate: TAMAL PAL

Roll No: 18920222011

Date: 06.06.2024

Place: Durgapur

Dr. B. C. Roy College of Pharmacy and ABS 0 2023-24

This is to certify that the Project entitled "An Investigation on the Therapeutic Potential of Purified Roots of Plumbago zeylanica in an Experimental Rat Model of Hemorrhoids" by TAMAL PAL in partial fulfilment for the MASTER OF PHARMACY (PHARMACOLOGY) under MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither this thesis nor any part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examination MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY for assessment.

Signature of Guide

Name of Guide: Dr. Yadu Nandan Dey

Yadw Mandan Duy

Date: 06-06-2024

Place: Durgapur

PROF SAMIR KUMAR SAMANTA

(PRINCIPAL)

Date:

Place: Durgapur

Prof. (Dr.) Samir Kumar Samanta M. Pharm., Ph.D (J.U.) Principal

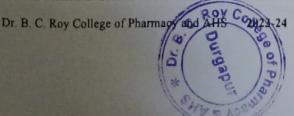
Dr. B. C. Roy College of Pharmacy & AHS Durgapur, West Bengal-713206

Name of the External Examiner:

Date:

Place: Durgapur





Dr. B. C. Roy College of Pharmacy & AHS Durgapur, West Bengal-713200





A Project Report on

# Synthesis of Coumarin Analogues to be Tested as **Antimicrobials**

Submitted by

Tandrika Roy

University Regn. No. -221892310023

Roll No. -18920722004

Under the guidance of

Dr. Sudip Kumar Mandal

Assistant Professor

In partial fulfilment of the Requirement for the Degree of

Master of Pharmacy in Pharmaceutical Analysis

Maulana Abul Kalam Azad University of Technology

West Bengal

Dr. B. C. Roy College of Pharmacy and Allied Health Sciences

Durgapur 713206

Academic Year: 2023 - 2024



Durgapur, Wasi Benga-713209

I hereby declare that the Project entitled "Synthesis of Coumarin Analogues to be Tested as Antimicrobials" in partial fulfilment of the requirement for the award of Master of Pharmacy submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is an authentic record of bona fide work carried out by me under the guidance of Dr. Sudip Kumar Mandal.

The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University / Institution

Tandseika Roy

Name of Candidate: Tandrika Roy

RollNo.18920722004

Date 9-6-2024 Place Duriga Puri



This is to certify that the Project entitled "Synthesis of Coumarin Analogues to be Tested as Antimicrobials" by Tandrika Roy in partial fulfilment for the MASTER OF PHARMACY IN PHARMACEUTICALS ANALYSIS under MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither this thesis nor any part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examination MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY for assessment.

Name of Guide.

DR. SUDIP KUMAR MANDAI

Signature of the External

Examiner

Place 05/06/24

Dale

PROF (DR.) SAMIR KR. SAMANTA

(PRINCIPAL)

Prof. (Dr.) Samir Kumar Samanta M. Pharm., Ph.D (J.U.)

Principal

Dr. B. C. Roy Corlege of Pharmacy & AHS

Durgapur, West Bengal-713205

Ondabn' Mest Beuday 1



A

**Project Report on** 

# **IMPROVEMENT OF**

# **BIOPHARMACEUTICAL PROPERTIES OF** MODEL ANTI-HYPERTENSIVE DRUG BY **SOLID DISPERSION TECHNIQUE**

Submitted by

### **TANMOY CHOWDHURY**

University Regn. No. -221892310009 Roll No. -18921822009

Under the guidance of

Dr. Manami Dhibar M. Pharm., Ph.D.

Assistant Professor, Pharmaceutics Dr. B. C. Roy College of Pharmacy and Allied Health Sciences, Durgapur-06

In partial fulfilment of the Requirement for the Degree of

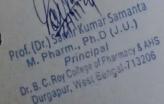
Master of Pharmacy in Industrial Pharmacy

Submitted to Maulana Abul Kalam Azad University of Technology West Bengal

Dr. B. C. Roy College of Pharmacy and Allied Health Sciences

Durgapur 713206

Academic Year: 2023 - 2024





MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY.

I hereby declare that the Project entitled "Improvement of biopharmaceutical properties of model anti-hypertensive drug by solid dispersion technique" in partial fulfilment of the requirement for the award of Master of Pharmacy submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is an authentic record of bona fide work carried out by me under the guidance of Dr. Manami Dhibar.

The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University / Institution.

Tanney Chrudhury

Signature

Name of Candidate: Tanmoy Chowdhury

Roll No: 18921822009

Date:

Place: Dr. B.C. Roy College of Pharmacy & Allied Health Sciences, Durgapur



i | Page

# CERTIFICATE This is to certify that the Project entitled "Improvement of biopharmaceutical properties of model anti-hypertensive drug by solid dispersion technique" by Tanmoy Chowdhury in partial fulfilment for the MASTER OF PHARMACY (INDUSTRIAL PHARMACY) under MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither this thesis nor any part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examination MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY for assessment. Dr. Manami Dhibar M. Pharm., Ph.D. Assistant Professor Dr. B. C. Roy of Pharmacy & AHS Signature of the External Signature of Guide Examiner Name of Guide. Dr. Manami Dhibar Place: M. Pharm., Ph.D. Assistant Professor Date: Dr. B. C. Roy College of Pharmacy & AHS., Durgapur PROF. SAMIR KUMAR SAMANTA Prof. (Dr.) Samir Kumar Samanta M. Pharm., Ph.D (J.U.) Principal Dr. B. C. Ray College of Pharmacy & AHS Durgapur, West Bengal-713206 Place ii|Pago A PP age





# Project Report On

# Phytochemical Investigation and Pharmacological Evaluation of Purified roots of Plumbago zeylanica in experimentally-**Induced Arthritis in Rats**

Submitted by

#### TANMOY DAS

University Regn. No. -221892310053 of 2022-2023

Roll No. -18920222004

Under the guidance of

#### Dr. YADU NANDAN DEY

Associate Professor, BCRCP

In partial fulfilment of the Requirement for the Degree of Master of Pharmacy in Pharmacology

Submitted to: Maulana Abul Kalam Azad University of Technology West Bengal

Dr. B. C. Roy College of Pharmacy and Allied Health Sciences Durgapur 713206

Academic Year: 2023-2024



I bereby declare that the Project entitled "Phytochemical investigation and pharmacological evaluation of purified roots of Plumbago zeylanica in experimentallyinduced arthritis in rats" in partial fulfilment of the requirement for the award of Master of Pharmacy submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is an authentic record of bona fide work carried out by me under the guidance of Dr. YADU NANDAN DEY.

The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University / Institution.

Janmey Has Signature

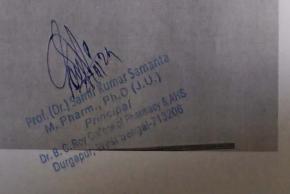
Name of Candidate: Tanmoy Das

Roll No: 1892022 2004

Date: 5-06-24

Place: Dungapun





This is to certify that the Project entitled "Phytochemical investigation and pharmacological evaluation of purified roots of Plumbago zeylanica in experimentallyarthritis in rats" by Tanmoy das in partial fulfilment for the MASTER OF PHARMACY (PHARMACOLOGY) under MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither this thesis nor any part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examination MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY for assessment.

Yadu Nandan Dy.

Signature of Guide

Name of Guide: Dr. Yadu Nandan Ly

Signature of the External Examiner

Place: Date:

PROF. SAMIR KUMAR SAMANTA (PRINCIPAL)

Place:

Date:

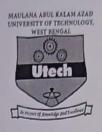
Prof. (Dr.) Samir Kumar Samanta M. Pharm., Ph.D (J.U.) Principal Dr. B. C. Roy College of Pharmacy & AHS Durgapur, West Bengal-713206

undagund

Dr. B. C. Roy College of Pharmacy and A.H.S 2023-2024.

Dr. B. C. Roy Co





Project report on

## IMPROVEMENT OF THE PHARMACOKINETIC PROFILE OF ANTIFUNGAL AGENT USING NANO-LIPOIDAL TECHNOLOGY

Submitted by Tufan Koley

University Regn. No.-221892310038(2022-23) Roll No. - 18920322014

> Under the guidance of Mr. SAGAR SENGUPTA Associate Professor, BCRCP

Submitted to In fulfilment of the Requirement for the Degree of Master of Pharmacy in Pharmaceutics

Maulana Abul Kalam Azad University of **Technology West Bengal** 

Dr. B.C. Roy College of Pharmacy and Allied Health Sciences Durgapur 713206

AcademicYear:2023-2024





I hereby declare that the Project entitled "Improvement of the pharmacokinetic profile of antifungal agent using nano-lipoldal technology". in partial fulfilment of the requirement for the award of Master of Pharmacy submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is an authentic record of bona fide work carried out by me under the guidance of Mr. SAGAR SENGUPTA.

The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University / Institution.

Toban Kaley Signature

Name of Candidate: -Tufan Koley

Roll No: - 18920322014

Date: 05/06/2024

Place: - Durgapur.





This is to certify that the Project entitled "Improvement of the pharmacokinetic profile of antifungal agent using nano-lipoidal technology" by Tufan koley in partial fulfilment for the MASTER OF PHARMACY (PHARMACEUTICS)under MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither this thesis nor any part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examination MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WEST BENGAL for assessment.

Guide:- Mr. SAGAR SENGUPTA

Place:- Durgapur. Date: - 5/6/2024

> Associate Professor
> Dr. B. C. Roy College of Pharmacy and AHS Durgapur-713206

PROF.SAMIR KUMAR SAMANTA (PRINCIPAL)

Place: Date:

Prof. (Dr.) Samir Kumar Samanta M. Pharm., Ph.D (J.U.) Principal
Dr. B. C. Roy College of Pharmacy & AHS
Durgapur, West Bengal-713206

Signature of the External Exa

Place:-Date:-





Project Report

## INVESTIGATIONS ON THE EFFECT OF HUMAN PLACENTAL EXTRACT IN TREATMENT-RESISTANT DEPRESSION

Submitted by

#### **DISHA DAS**

University Regn. No. 221892310041 of 2022 Roll No. 18920222006

> Under the Guidance of Dr. Shyamshree S. S. Manna Professor of Pharmacology

In partial fulfillment of the Requirement for the Degree of Master of Pharmacy in Pharmacology

Submitted to

Maulana Abul Kalam Azad University of Technology West Bengal

Dr. B. C. Roy College of Pharmacy and Allied Health Sciences

Durgapur 713206

AY:2023-2024

Prof. (Dr.) Amir Kumar Samanta M. Pharm., Ph.D (J.U.)

Durgapur, West Bengal-713206



I hereby declare that the Project entitled "Investigations on the Effect of Human Placental Extract in Treatment-Resistant Depression" in partial fulfilment of the requirement for the award of Master of Pharmacy submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is an authentic record of bona fide work carried out by me under the guidance of Dr. Shyamshree S. S. Manna.

The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University / Institution.

Disha Das

Disha Das

Roll No: 18920222006

Place: Durgapur

Date: 06/06/2024



This is to certify that the project entitled "Investigations on the Effect of Human Placental Extract in Treatment-Resistant Depression" by Ms Disha Das in partial fulfilment for the MASTER OF PHARMACY (PHARMACOLOGY) under MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither this thesis nor any part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examination MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WEST BENGAL for assessment.

Signature of Guide

Dr. Shyamshree S. S. Manna

Place: Durgapur

Date: 06/06/24

Examiner

Place: Durgapur

Date:

Prof. Samir Kumar Samanta

(Principal)

Prof. (Dr.) Samir Kumar Samanta M. Pharm., Ph.D (J.U.) Dr. B. C. Roy College of Pharmacy & AHS Durgapur, West Bengal-713206 Principal

Place: Durgapur

Date:



May 1 890 391-7 13206





SYNOPSIS ON

## "FORMULATION DEVELOPMENT & CHARACTERIZATION OF NARINGIN LOADED POLYCAPROLACTONE NANOPARTICLES"

Submitted by

### JAGANNATH PANJA

University Regn. No. 221892310003 of 2022-23 Roll No. 18921822008

Under the guidance of

Mrs. Rituparna Chaki Ghosh

(Assistant Professor, Department of Pharmaceutics)

In partial fulfilment of the Requirement for the Degree of Master of Pharmacy in Industrial Pharmacy

Submitted to

Maulana Abul Kalam Azad University of Technology West Bengal

Dr. B. C. Roy College of Pharmacy and Allied Health Sciences Durgapur 713206

ear: 2023 - 2024

1 am hereby declared that the Project entitled "FORMULATION DEVELOPMENT & CHARACTERIZATION OF NARINGIN LOADED POLYCAPROLACTONE NANOPARTICLES" in partial fulfilment of the requirement for the award of Master of Pharmacy submitted to MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WEST BENGAL, is an authentic record of bona fide work carried out by me under the guidance of Mrs. Rituparna Chaki Ghosh.

The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University / Institution.

Tagamath Panja.

Signature

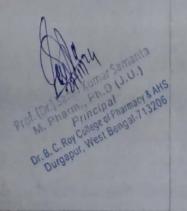
JAGANNATH PANJA.

Name of Candidate: Roll No: 18921822008

Date: 05/01/2014.

Place: DURGIAPUR.





This is to certify that the Project entitled "FORMULATION DEVELOPMENT & CHARACTERIZATION OF NARINGIN LOADED POLYCAPROLACTONE NANOPARTICLES" by JAGANNATH PANJA in partial fulfilment for the MASTER OF PHARMACY (INDUSTRIAL PHARMACY) under MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither this thesis nor any part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examination MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY for assessment.

Signature of the External

Examiner

Name of Guide: Mrs. Rituparina Chaki Gihosh.

Place: DURGAPUR.

Place:

Date:

PROF. SAMIR KUMAR

SAMANTA (PRINCIPAL)

Prof. (Dr.) Samir Kumar Samanta M. Pharm., Ph.D (J.U.) Principal

Place: Date:

Dr. B. C. Roy College if Pharmacy & AHS Durgapur, West Bengal-713206







Project Report on

TO EVALUATE THE EFFECT OF GRANULES TO FINES RATIO ON IN-PROCESS PARAMETERS AND DISSOLUTION OF PARACETAMOL (500MG) TABLETS.

> Submitted by Krishnendu Sarkar

University Regn. No. - 221892310005

Roll No. -18921822007

Under the guidance of MD. WAIZUL HAQUE ANSARI

Associate Professor

In partial fulfilment of the Requirement for the Degree of Master of Pharmacy in Industrial Pharmacy

Submitted to

Maulana Abul Kalam Azad University of Technology West Bengal

Dr. B. C. Roy College of Pharmacy and Allied Health Sciences Durgapur 713206

Academic Year: 2023 - 2024

I hereby declared that the Project entitled "TO EVALUATE THE EFFECT OF GRANULES TO FINES RATIO ON IN-PROCESS PARAMETERS AND DISSOLUTION OF PARACETAMOL (500MG) TABLETS" in partial fulfilment of the requirement for the award of Master of Pharmacy submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is an authentic record of bona fide work carried out by me under the guidance of Md Waizul Haque Ansari, Associate professor , Dr.B.C. Roy College of Pharmacy & AHS.

The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University / Institution.

Anisknondu Samman

Krishnendu Sarkar

Roll No:18921822007

Date: 3/10924

Place: Durgapur



This is to certify that the Project entitled "TO EVALUATE THE EFFECT OF GRANULES TO FINES RATIO ON IN-PROCESS PARAMETERS AND DISSOLUTION OF PARACETAMOL (500MG) TABLETS " by Krishnendu sarkar in partial fulfilment for the MASTER OF PHARMACY (INDUSTRIAL PHARMACY ) under MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither his/her thesis nor any part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examination MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY for assessment.

Signature of Guide

Name of Guide: Md Weild Where

Place: Jungapus

Date: 31.05.24

Signature of the

Place:

Date:

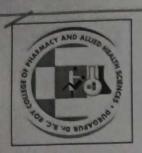
(PRINCIPAL)

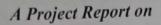
PROF (DR.) SAMIR KR SAMANTA Prof. (Dr.) Samir Kumar Samanta M. Pharm., Ph.D (J.U.) Principal

Dr. B. C. Roy College of Pharmacy & AHS Durgapur, West Bengal-713206

Durgapui









## SYNTHESIS, CHARACTERIZATION AND ASSESSMENT OF ANTIMICROBIAL ACTIVITY OF NOVEL CHARGE TRANSFER COMPLEXES OF 3,5-DINITROSALICYLIC ACID WITH **ETHYLENEDIAMINE**

Submitted by MOLOY ROY

University Regn. No. - 221892310015 OF 2022-23 Roll No. -18920722014

Under the guidance of

## DR. MANABENDRA DHUA

Assistant professor, Department of Pharmaceutical Chemistry & Analysis Dr. B.C. Roy College of Pharmacy & AHS, Durgapur

> In partial fulfilment of the Requirement for the Degree of Master of Pharmacy in Pharmaceutical Analysis

> > Submitted to

Maulana Abul Kalam Azad University of Technology West Bengal

Dr. B. C. Roy College of Pharmacy and Allied Health Sciences Durgapur 713206

cademic Year: 2023 - 2024

Prof. (Dr.) Stmfr Dr. B. C. Roy College of Pharmacy & AHS Durgapur, West Bengal-713206

I am hereby declared that the Project entitled "synthesis, characterization & assessment of antimicrobial activity of novel charge transfer complexes of 3,5-dinitrosalicylic acid with ethylenediamine" in partial fulfilment of the requirement for the award of Master of Pharmacy submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is an authentic record of bona fide work carried out by me under the guidance of Dr. Manabendra Dhua.

The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University / Institution.

Signature Cou

Name of Candidate: Moloy Roy

Roll No: 18920722014

Date: 04-Jun- 2024

Place: Durgapur - 06



Durgapur, West Bengal-713206

This is to certify that the Project entitled "synthesis, characterization & assessment of antimicrobial activity of novel charge transfer complexes of 3,5-dinitrosalicylic acid with ethylenediamine" by Moloy Roy in partial fulfilment for the MASTER OF PHARMACY (PHARMACEUTICAL ANALYSIS) under MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither his/her thesis nor any part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examination MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY for assessment.

Signature of Guide

Name of Guide: Dr. Manabendra Dhua

Date: 04-Jun-2024

Place: Durgapur - 06

PROF (DR.) SAMIR KR. SAMANTA

(PRINCIPAL) Prof. (Dr.) Samir Kumar Samanta.
M. Pharm., Ph.D (J.U.)

Indebine

Date: 04 - Jun- 2024

Dr. B. C. Roy College of Pharmacy & AHS

Durgapur, West Bengal-713206

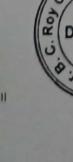
Place: Durgapur - 06

Should Jeth

Name of External Examiner

Date: 05/06/24

Place: Durgapur - 06



Datashir Mest Eessy 113509





Project Report on

## DESIGN AND EVALUATION OF SLOW RELEASE GASTRORETENTIVE MICROSPHERES

Submitted by NABYENDU MANDAL University Regn. No. -221892310006 Roll No. -18921822005 Under the guidance of

Dr. Subhabrata Ray

M. Pharm, Ph. D.

In partial fulfilment of the Requirement for the Degree of

**Master of Industrial Pharmacy** 

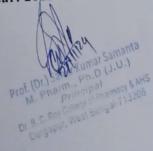
Maulana Abul Kalam Azad University of Technology

West Bengal

Dr. B. C. Roy College of Pharmacy and Allied Health Sciences

**Durgapur** 713206 Academic Year: 2023 - 2024







I hereby declare that the Project entitled "design and evaluation of slow release" gastro retentive microspheres" in partial fulfilment of the requirement for the award of Master of industrial Pharmacy submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is an authentic record of bona fide work carried out by me under the guidance of Dr. Subhabrata Ray.

The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University / Institution.

Signature

Name of the Candidate: Nabyendu Mandal

Roll No: 18921822005

Valyende Mardal

Date: 3/6/29
Place: Surgapur



This is to certify that the Project entitled "design and evaluation of slow release gastroretentive microspheres" by Nabyendu Mandal in partial fulfilment for the MASTER OF INDUSTRIAL PHARMACY under MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither this thesis nor any part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examination MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY for assessment.

Signature of Guide

Name of Guide: Dr. Subhabrata Ray

Signature of the External

Examiner

Place:

Date:

PROF. SAMIR KUMAR

SAMANTA (PRINCIPAL) Prof. (Dr.) Samir Kumar Samanta

M. Pharm., Ph.D (J.U.)

Place: Ango pur Dr. B. C. Roy College Pharmacy & AHS

Durgapur, Wast bungar-713206







Project Report On

## **Evaluation of the Improvement of Peripheral** Neuropathy Using the Hydroalcoholic Extract of Cucurbita maxima Seeds in STZ Induced Diabetic Rats

Submitted by

## Nurul Hassan Mondal

University Reg No.- 221892310042 of 2022-2023

Roll No.- 18920222014

Under The Guidance of

## Mr. Saroj Singhmura

Associate Professor

In partial fulfilment of the Requirement for the Degree of

Master of Pharmacy in Pharmacology

Submitted to

## Maulana Abul Kalam Azad University of Technology,

## West Bengal

Dr. B. C. Roy College of Pharmacy and Allied Health Sciences

Durgapur 713206

demic Year: 2023 - 2024

#### Declaration

I hereby declare that the Project entitled "Evaluation of the Improvement of Peripheral Neuropathy Using the Hydroalcoholic Extract of Cucurbita maxima Seeds in STZ Induced Diabetic Rats" in partial fulfilment of the requirement for the award of Master of Pharmacy submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is an authentic record of bona fide work carried out by me under the guidance of Mr.Saroj Singhmura (Assistant Professor).

The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University / Institution.

Date: 6/06/24

Place: Durgapur, WB

RollNo:18920222014

2022-2024) Dr. B. C. Roy College

### Certificates

This is to certify that the Project entitled "Evaluation of the Improvement of Peripheral Neuropathy Using the Hydroalcoholic Extract of Cucurbita maxima Seeds in STZ Induced Diabetic Rats" by Nurul Hassan Mondal in partial fulfilment for the Master of Pharmacy (Pharmacology) under Maulana Abul Kalam Azad University of Technology, West Bengal is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither this thesis nor any part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examination Maulana Abul Kalam Azad University of Technology, West Bengal for assessment.

Signature of guide

Name: Mr.Saroj Singhmura

(Assistant Professor, BCRCP)

Date: 6/6/24

Place: Durgapur, WB

External Examiner

Date:

Place: Durgapur, WB

Signature of principal

Name: Prof. Samir Kumar Samanta

(Principal)

Date: 6/6/24

Prof. (Dr.) Samir Kumar Samanta M. Pharm., Ph.D (J.U.) Principal

Dr. B. C. Roy College of Pharmacy & AHS Durgapur, West Bengal-713206

Place: Durgapur, WB

Page ii





A Thesis

On

# Effects of Cuscuta reflexa Roxb as aldose reductase inhibitor in Delaying Diabetic Cataract

Submitted by

#### Pallabi Pradhan

University Reg. No. -221892310043 Roll No. -18920222010

Under the guidance of

#### MR. SAROJ SINGHMURA

Assistant Professor, Department of Pharmacology
In partial fulfilment of the Requirement for the Degree of
Master of Pharmacy in Pharmacology

Submitted to

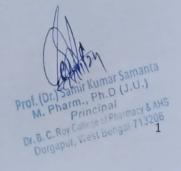
Maulana Abul Kalam Azad University of Technology West Bengal

Dr. B. C. Roy College of Pharmacy and Allied Health Sciences

Durgapur

**Academic Year: 2023 – 2024** 







I hereby declare that the Project "Effects of Cuscuta reflexa Roxb as aldose reductase inhibitor in Delaying Diabetic Cataract" in partial fulfillment of requirement for award of Masters of Pharmacy in Pharmacology, submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is an authentic record of bona fide work carried out by me under the guidance of Mr. Saroj Singhmura (Assistant Professor, Department of Pharmacology). The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University / Institution.

Pallabi Pradhan

Signature of the candidate

Roll no: 18920222010

Date: 06.06.24

Place: Durgapur



This is to certify that the Project entitled "Effects of Cuscuta reflexa Roxb as aldose reductase inhibitor in Delaying Diabetic Cataract" by Pallabi PHARMACY MASTER OF Pradhan in partial fulfilment for the (PHARMACOLOGY) under MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither this thesis nor any part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examination MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY for

Signature of Guide

Name of Guide: Mr. Saroj Binghmura

Date: 06.06.24

assessment.

Place: Durgapur

PROF (DR.) SAMIR KR. SAMANTA

Prof. (Dr.) Samir Kumar Samanta

Principal

Principal

Dr. B. C. Roy College of Pharmacy & AHS

Durgapur, West Bengal-713206

Date:

Place:

Signature

Name of External Examiner

Date:-

Place:-

lege of

ege of p

Prof. (Dr.) Samir Kumar Samanta M. Pharm., Ph.D (J.U.) 3 Principal Dr. B. C. Roy College of Pharmacy & AHS Durgapur, West Bengal-713206





## Project Report on

## ENHANCEMENT OF SOLUBILITY AND DISSOLUTION OF BCS CLASS IV DRUG USING COCRYSTALLIZATION **APPROACH**

Submitted by

#### **PANKAJ SAHA**

University Regn. No. - 221892310030 (2022-23) Roll No. - 18920322006

Under the guidance of

Prof. (Dr.) Santanu Chakraborty M. Pharm., Ph.D., FIC

Divisional In-Charge, Division of Pharmaceutics Dr. B. C. Roy College of Pharmacy and Allied Health Sciences Durgapur 713206

In partial fulfilment of the Requirement for the Degree of Master of Pharmacy in Pharmaceutics

Submitted to

Maulana Abul Kalam Azad University of Technology West Bengal

Dr. B. C. Roy College of Pharmacy and Allied Health Science

Durgapur 713206

Academic Year: 2023 - 2024





I hereby declare that the Project entitled "Enhancement of Solubility and Dissolution of BCS Class IV Drug using Cocrystallization approach" in partial fulfilment of the requirement for the award of Master of Pharmacy submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is an authentic record of bonafide work carried out by me under the guidance of Prof. (Dr.) Santanu Chakraborty.

The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University / Institution.

Pankaj Saha

Signature

Name of Candidate: Pankaj Saha

Roll No: 189203220066

Date: 06/06/2024

Place: Dr. B.C. Roy College of Pharmacy and Allied Health Sciences, Durgapur





anta

This is to certify that the Project entitled "Enhancement of Solubility and Dissolution of BCS Class IV Drug using Cocrystallization approach" by Pankaj Saha in partial fulfilment for the MASTER OF PHARMACY (PHARMACEUTICS) under MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither this thesis nor any part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examination MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY for assessment.

Jomlanu Charlarabarly 106/24
Signature of Guide 1 66/106/24

Name of Guide:

Prof. (Dr.) Santanu Chakraborty

M.Pharm., Ph.D., FIC

Divisional In-Charge, Pharmaceutics Prof. (Dr.) Santanu Chakraborty

M. Pharm., Ph.D., FIC

Place: Durgapur DIC, Pharmaceutics Division Date:

Dr. B. C. Roy College of Pharmacy and AHS Bidhannagar, Durgapur-713206

Signature of the External

Examiner

Place: Durgapur

Date:

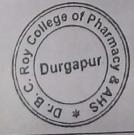
MIR KUMAR SAMANTA (PRINCIPAL)

Prof. (Dr.) Samir Kumar Samanta M. Pharm., Ph.D (J.U.) Principal

Dr. B. C. Roy College of Pharmacy & AHS Durgapur, West Bengal-713206

Place: Durgapur

Date:



II





## **Project Report on**

### FORMULATION DEVELOPMENT STUDIES ON AN OPHTHALMIC IN-SITU GEL

Submitted by

#### PARTHA PRATIM BEZ

University Regn. No. - 221892310031 of 2022-23 Roll No. - 18920322011

Under the guidance of

Prof. Subhabrata Ray Professor-In-Charge (PG Studies & Research)

In partial fulfilment of the Requirement for the Degree of Master of Pharmacy in Pharmaceutics

Submitted to

Maulana Abul Kalam Azad University of Technology West Bengal

Dr. B. C. Roy College of Pharmacy and Allied Health Sciences Durgapur 713206 Academic Year: 2023 - 2024

> Prof. (Dr.) Samir Kumar Samanta M. Pharm., Ph.D (J.U.) Or B. C. Roy College of Pharmacy & AHS aour, West Bengal-713206



I am hereby declared that the Project entitled "Formulation Development Studies On an Ophthalmic In-Situ Gel" in partial fulfilment of the requirement for theaward of Master of Pharmacy submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is an authentic record of bona fide work carried out by me under the guidance of Prof. Subhabrata Ray.

The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University / Institution.

Partha Pratim Bez

Name of Candidate: PARTHA PRATIM BEZ

Roll No: 18920322011

Date: 05/06/2024

Place: Durgapur





This is to certify that the Project entitled "Formulation Development Studies On an Ophthalmic In-Situ Gel" by Partha Pratim Bez in partial fulfilment for the MASTER OF PHARMACY IN PHARMACEUTICS under MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither his/her thesis nor any part of it has been submitted for any other academic award anywherebefore. The thesis is forwarded to Controller of Examination MAULANA ABUL KALAMAZAD UNIVERSITY OF TECHNOLOGY for assessment.

Signature of Guide

Name of Guide: PROF. SUBHABRATA RAY

Date: 05/06/2024

Dr. B. C. Roy College of Pharmacy and AHS Durgapur-713206

Place: DURGAPUR

Date: 05/06/2024

PROF. SAMIR KR. SAMANTA Prof. (Dr.) Samir Kumar Samanta (PRINCIPAL) M. Pharm., Ph.D (J.U.) Principal

Dr. B. C. Roy College of Pharmacy & AHS
Durgapur, West Bengal-713206

Place: DURGAPUR

Signature

Name of External Examiner:

Date: Of 106/2024
Place: Dwgopwy







A

Project Report On

Development and Pharmacological Evaluation of polyherbal formulation (tablet) on experimentally-induced hemorrhoids

Submitted by

**Payel Ghosh** 

University Reg No.- 221892310044 of 2022-2023

Roll No.- 18920222015

Under The Guidance of

Dr. Yadu Nandan Dey

Associate Professor

In partial fulfilment of the Requirement for the Degree of

Master of Pharmacy in Pharmacology

Submitted to

Maulana Abul Kalam Azad University of Technology, West

### Bengal

Dr. B. C. Roy College of Pharmacy and Allied Health Sciences Durgapur

713206

Academic Year: 2023 - 202



I hereby declare that the Project entitled "Development and Pharmacological Evaluation of polyherbal formulation (tablet) on experimentally-induced hemorrhoids" in partial fulfilment of the requirement for the award of Master of Pharmacy submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is an authentic record of bona fide work carried out by me under the guidance of Dr. Yadu Nandan Dey (Associate Professor).

The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University / Institution.

Date:

Place: Durgapur, WB

Toy exhait.

Name: Payel Ghosh Roll No: 18920222015



Prof. (Dr.) Samir Kumar Samanta M. Pharm., Ph.D (J.U.) Principal Dr. B. C. Rey College of Pharmacy & AHS Durgapur, West Bengal-713206

This is to certify that the Project entitled "Development and Pharmacological Evaluation of polyherbal formulation (tablet) on experimentally-induced hemorrhoids" by PAYEL GHOSH in partial fulfilment for the Master of Pharmacy (Pharmacology) under Maulana Abul Kalam Azad University of Technology, West Bengal is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither this thesis nor any part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examination Maulana Abul Kalam Azad University of Technology, West Bengal for assessment.

Yedu Man Dan Ley Signature of guide

Name: Dr. Yadu Nandan Dey

(Associate Professor, BCRCP)

Date: 06-06-2024

Place: Durgapur, WB

External Examiner

Date:

Place: Durgapur, WB

Signature of principal

Samanta

(Principal)

Date:

Place: Durgapur, WB

Name: Prof. Samir Kumar Prof. (Dr.) Samir Kumar Samanta M. Pharm., Ph.D (J.U.)

Principal Dr. B. C. Roy College of Pharmacy & AHS Durgapur, West Bengal-713206

> Prof. (Dr.) Samir Kumar Samanta M. Pharm., Ph.D (J.U.) Principal

Dr. B. C. Roy College of Pharmacy & AHS apur, West Bengal-713206





## Project Report on

## PREPARATION AND EVALUATION OF FILMS FOR WOUND HEALING

#### Submitted by PIU GHOSH

University Regn. No. - 221892310007 (2022-23) Roll No. -18921822006

> Under the guidance of Mr. Saptarshi Dutta

In partial fulfilment of the Requirement for the Degree of Master of Pharmacy in Industrial Pharmacy

Submitted to

Maulana Abul Kalam Azad University of Technology West Bengal

Dr. B. C. Roy College of Pharmacy and Allied Health Sciences Durgapur 713206

Academic Year: 2023 - 2024



I hereby declare that the Project entitled "Preparation and evaluation of film for wound healing" in partial fulfilment of the requirement for the award of Master of Pharmacy submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is an authentic record of bona fide work carried out by me under the guidance of Mr. Saptarshi Dutta.

The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University / Institution.

Gira Grhosh Signature

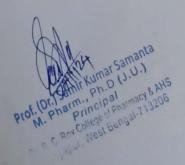
Name of Candidate: Pice (Thoch

Roll No: 18921822006

Date: 6\06\2024

Place: DURGAPUR





This is to certify that the Project entitled "Preparation and evaluation of film for wound healing"by Piu Ghosh in partial fulfilment for the MASTER OF PHARMACY (INDUSTRIAL PHARMACY) under MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither this thesis nor any part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examination MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY for assessment.

Name of Guide: Mr. Saptarshi Dutta

Date:

Place: Durgapur

PROF (DR. SAMIR KR. SAMANTA

(PRINCIPAL)

Prof. (Dr.) Samir Kumar Samanta M. Pharm., Ph.D (J.U.) Principal

Date:

Dr. B. C. Roy College of Pharmacy & AHS Durgapur, West Bengal-713206

Place: Durgapur

Signature

Name of External Examiner:

Date:

Place: Durgapur





Project Report on

## "FORMULATION AND CHARACTERIZATION OF GEL BASED COPPER NANOPARTICLES OF **ELLAGIC ACID**"

Submitted by

#### PIYASA CHAKRABORTY

University Regn. No. -221892310032 of 2022-23 Roll No. -18920322012

Under the guidance of

## Mrs. Rituparna Chaki Ghosh

(Assistant Professor, Department of Pharmaceutics)

In partial fulfilment of the Requirement for the Degree of Master of Pharmacy in Pharmaceutics

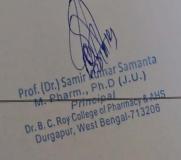
Submitted to

Maulana Abul Kalam Azad University of Technology West Bengal

Dr. B. C. Roy College of Pharmacy and Allied Health Sciences Durgapur 713206

Academic Year: 2023 - 2024







I am hereby declared that the Project entitled "FORMULATION AND CHARACTERIZATION OF GEL BASED COPPER NANOPARTICLES OF ELLAGIC ACID" in partial fulfilment of the requirement for the award of Master of Pharmacy submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is an authentic record of bona fide work carried out by me under the guidance of Mrs. Rituparna Chaki Ghosh.

The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University / Institution.

Pugasa Chakтabonty

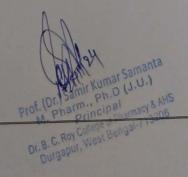
Name of Candidate: PIYASA CHAKRABORTY

Roll No: 18920322012

Date: 06/06/24

Place: Durgapur





This is to certify that the Project entitled "FORMULATION AND CHARACTERIZATION OF GEL BASED COPPER NANOPARTICLES OF ELLAGIC ACID" by PIYASA CHAKRABORTY in partial fulfilment for the MASTER OF PHARMACY (PHARMACEUTICS) under MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither her thesis nor any part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examination MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY for assessment.

> Name of Guide: Mrs. Rituparna Chaki Ghosh Date Place: Durgapur AL)
>
> Prof. (Dr.) Samir Kumar Samanta
> M. Pharm.. Ph.D (J.U.)
> Principal
> Dr. B. C. Roy College of Pharmacy & AHS
> Ourgapur, West Gengal-713206

(PRINCIPAL)

Date:

Place: Durgapur

Signature Name of External Examiner:

Place Durgapur





П





A Project Report

on

PHYTOCONSTITUTES OF THE RAPEUTIC DOSES OF CLITORIA TERNATEA IN
PRECLINIC MODELS OF MICE

Submitted by

PYFORIMA MAJI University Regn. No. -221892310016 Roll No.-18920722012

Under the guidance of

Dr. Souvik Basak

Professor

Dr BC Roy College of Pharmacy and Allied Health Sciences, Durgapur

In partial fulfilment of the Requirement for the Degree of Master of Pharmacy in Pharmaceutical Analysis

Submitted to

Maulana Abul Kalam Azad University of Technology

West Bengal

Dr. B. C. Roy College of Pharmacy and Allied Health Sciences Durgapur 713206

Academic Year: 2022 - 2024



Prof. (Dr.) Saff Kumar Samanta M. Pharm., Ph.D (J.U.) Principal Dr.B. C. Roy College of Pharmacy & AHS Durgapur, West Bengal-7 12200



I hereby declare that the Project entitled "Bioanalytical profiling of brainbioamines and associated phytoconstituents of therapeutic doses of Clitoria ternatea in preclinical models on mice" in partial fulfilment of the requirement for the award of Master of Pharmacy submitted to Maulana Abul Kalam Azad University of Technology. West Bengal, is an authentic record of bona fide work carried out by me under the guidance of Dr Souvik Basak.

The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University / Institution.

Pyconima Maji

Signature

Name of Candidate: Pyeorima Maji

Roll No: 18920722012

Date:

Place: Durgapur



Prof. (Dr.) Samir Kumai M. Pharm., Ph.D (J.U.) Principal Dr. B. C. Roy College of Pharmacy & AHS Durgapur, West Bengal-713206

This is to certify that the Project entitled "Bioanalytical profiling of brain bioamines and associated phytoconstituents of therapeutic doses of Clitoria ternatea in preclinical models on mice" by Pyeorima Maji in partial fulfilment for the MASTER Of PHARMACY (Pharmaceutical Analysis) under MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither this thesis nor any part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examination MAULANA ABLL KALAM AZAD UNIVERSITY OF TECHNOLOGY for assessment.

Signature of Guide

Name of Guide: Dr Souvik Basak

Place: Durgapur

Date:

Land pythisa Signature of the External Examiner

Place: Durgapur

Date: 05 /06/24

PROF. SAMIR KUMAR SAMANTA

(PRINCIPAL)

Place: Durgapur

Date:

Prof. (Dr.) Samir Kumar Samanta M. Pharm., Ph.D (J.U.) Principal Dr. B. C. Roy College of Pharmacy & AHS

Ourgapur, West Bengal-713208

mir Kumar Samanta Pharm., Ph.D (J.U.) Dr. B. C. Roy College of Pharmacy & ANS Principal





A Thesis

## Effects of Antidiabetic Isolate of Hydro alcoholic extract of Cuscuta reflexa (HAECR) in HFD-STZ Rats on its Antiobesity and Secondary Diabetic Complications

Submitted by

Rajib De

University Regn. No. -221892310045 Roll No. -18920222001

Under the guidance of

#### MR. SAROJ SINGHMURA

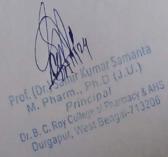
Assistant Professor, Department of Pharmacology In partial fulfillment of the Requirement for the Degree of Master of Pharmacy in Pharmacology

Submitted to

Maulana Abul Kalam Azad University of Technology West Bengal

Dr. B. C. Roy College of Pharmacy and Allied Health Sciences Durgapur 713206 Academic Year: 2023 - 2024







Thereby declare that the Project "Effects of Antidiabetic Isolate of Hydro alcoholic extract of Cuscuta reflexa (HAECR) in HFD-STZ Rats on its Antiobesity and Secondary Diabetic Complications" in partial fulfillment of requirement for award of the Degree of Masters of Pharmacy in Pharmacology submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is anauthentic record of bona fide work carried out by me under the guidance of Mr. Saroj Singhmura (Assistant Professor, Department of Pharmacology).

Rajib sle. Signature of the candidate

Roll no: 189 202 2200 1

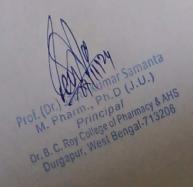
Date: 06.06.24

Place: Dungapuri

Dr. B. C. Roy College of Pharmacy & AHS

Durgapur-713206, West Bengal, India.





This is to certify that the Project entitled "Effects of Antidiabetic Isolate of Hydro alcoholic extract of Cuscuta reflexa (HAECR) in HFD-STZ Rats on its Antiobesity and Secondary Diabetic Complications" by Rajib De in partial fulfillment for the MASTER OF PHARMACY (PHARMACOLOGY) under MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither this thesis norany part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examination MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY for assessment.

Signature of Guide

Name of Guide: Mr. Sarcoj Singhmurca

Date: 06-06-24

Place: Dwgapwi

PROF (DR.) SAMIR KUMAR SAMANTA (PRINCIPAL)

Date:

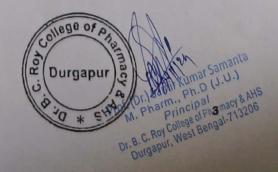
Place

Prof. (Dr.) Samir Kumar Samanta M. Pharm., Ph.D (J.U.) Principal Dr. B. C. Roy College of Pharmacy & AHS

Durgapur, West Bengal-713208

Name of External Examiner:









## Preclinical studies of antidepressant effects of hibiscus rosa sinensis extract on swiss albino mice

Submitted by

#### RIKU ROY

University Reg. No. -221892310046 OF 2022-23 Roll No. -18920222013

Under the guidance of

#### DR. ABHIK SI

Associate professor Department of pharmacology

In partial fulfilment of the Requirement for the Degree of Master of Pharmacy in Pharmacology

Submitted to

Maulana Abul Kalam Azad University of Technology West Bengal

Dr. B. C. Roy College of Pharmacy and Allied Health Sciences Durgapur 713206

Academic Year: 2023 - 2024





I hereby declare that the Project entitled "preclinical studies of antidepressant effects of hibiscus rosa sinensis extract on swiss albino mice" in partial fulfilment of the requirement for the award of Master of Pharmacy submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is an authentic record of bona fide work carried out by me under the guidance of DR. Abhik si.

The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University / Institution.

Signature

Riku Roy

Name of Candidate: Riku roy

Roll No:18920222013

Date: 06.06, 2024

Place: BCRCP, DURGAPUR

BCRCP, DURGAPUR



This is to certify that the Project entitled "preclinical studies of antidepressant effects of hibiscus rosa sinensis extract on swiss albino mice"by Riku roy in partial fulfilment for the MASTER OF PHARMACY (PHARMACOLOGY) under MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither this thesis nor any part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examination MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY for assessment.

Signature of Guide

Signature of the External

Examiner

Dr. Abhik Si. Name of Guide:

BCRCP, Durgapur. Place:

06.06.2024. Date:

Place:

Date:

MIR KUMAR SAMANTA

(PRINCIPAL)

Prof. (Dr.) Samir Kumar Samanta M. Pharm., Ph.D (J.U.)

Principal

Dr. B. C. Roy College of Pharmacy & AH

Durgapur, West Bengal-713206.

Place:

RCRCP DIDCAPID

Date:

Principa Page ii AHS Dr. B. C. Roy College of Phari Durgapur, West Bengal-713206





# DEVELOPMENT OF NOVEL COPPER NANOPARTICLE COMPLEXES WITH CIPROFLOXACIN AND VITAMIN C FOR ENHANCED ANTIBACTERIAL EFFICACY

Submitted by

# SAIKAT BHATTACHARYA

University Regn. No. -221892310047 of 2022-23 Roll No. - 18920222008

Under the guidance of

Dr. Sagarika Deepthy Tallapragada

Assistant Professor Department of Pharmacology

In partial fulfilment of the Requirement for the Degree of Master of Pharmacy in Pharmacology

Submitted to

Maulana Abul Kalam Azad University of Technology West Bengal

Dr. B. C. Roy College of Pharmacy and Allied Health Sciences Durgapur 713206 Academic Year: 2023 - 2024



Durgapur, West Bengal-71320a

I hereby declare that the Project entitled "Development of Novel Copper Nanoparticle Complexes with Ciprofloxacin and Vitamin C for Enhanced Antibacterial Efficacy" in partial fulfilment of the requirement for the award of Master of Pharmacy submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is an authentic record of bona fide work carried out by me under the guidance of Dr. Sagarika Deepthy Tallapragada.

The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University / Institution.

Saikat Bhattacharya.

Name of Candidate: Saikat Bhattacharya

Roll No: 18920222008

Date: 06/06/2024

Place: Durgapur.





This is to certify that the Project entitled "Development of Novel Copper Nanoparticle Complexes with Ciprofloxacin and Vitamin C for Enhanced Antibacterial Efficacy" by Saikat Bhattacharya in partial fulfilment for the MASTER OF PHARMACY (PHARMACOLOGY) under MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither this thesis nor any part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examination MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY for assessment.

Dr. Sagarika Deepthy Dr. Sagarika Deepthy Tallapragada
M. Pharm., Ph.D
Assistant Professor
Deepthy Tallapragada
M. Pharmacology

Dr. B. C. Roy College of Pharmacy & AHS Durgapur-713206

Name of Guide: Dr. Sagarika Deepthy Tallapragada

Date: 06/06/24

PROF (DR.) SAMIR KR. SAMANTA Prof. (Dr.) Samir Kumar Samanta

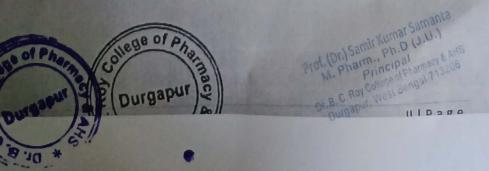
(PRINCIPAL)

M. Pharm., Ph.D (J.U.) Principal Dr. B. C. Roy College of Pharmacy & AHS Durgapur, West Bengal-713208

Place:

Name of External Examiner:

Date:







# STUDIES ON THE ROLE OF DRIED ETHANOLIC EXTRACT OF AGARICUS BISPORUS IN THE TREATMENT OF DEPRESSION IN MICE

Submitted by

#### SANDIPAN SAU

University Regn. No. - 221892310048 OF 2022-23 Roll No. - 18920222009

Under the guidance of

#### DR. ABHIK SI

Associate Professor Department of Pharmacology

In partial fulfilment of the Requirement for the Degree of Master of Pharmacy in Pharmacology

Submitted to

Maulana Abul Kalam Azad University of Technology West Bengal

Dr. B. C. Roy College of Pharmacy and Allied Health Sciences Durgapur 713206

Academic Year: 2023 - 2024



Prof. (Dr.) &a Pharm., Ph.D (J.U.) Dr. B. C. Roy College of Pharmacy & AHS Durgapur, West bengul-713206



I am hereby declared that the Project entitled "Studies on the role of dried ethanolic extract of Agaricus bisporus in the treatment of depression in mice" in partial fulfilment of the requirement for the award of Master of Pharmacy submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is an authentic record of bonafide work carried out by me under the guidance of DR. ABHIK SI.

The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University / Institution.

Sandipan Sau

Signature

Name of Candidate: Sandipan Sau

Roll No: 18920222009

Date: 06/06/2024

Place: Durgapur





This is to certify that the Project entitled "Studies on the role of dried ethanolic extract of Agaricus bisporus in the treatment of depression in mice" by Sandipan Sau in partial fulfilment for the MASTER OF PHARMACY (PHARMACOLOGY) under MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither his thesis nor any part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examination MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY for assessment.

Signature of Guide

Name of Guide: Dr. Abhik Si.

06 06. 2024 Date:

BCRCP Durgapor Place:

PROF (DR) SAMIR KR. SAMANT Arof. (Dr.) Samir Kumar Samanta M. Pharm., Ph.D (J.U.) Principal (PRINCIPAL) Dr. B. C. Roy College of Pharmacy & AHS

Durgapur, West Bengal-713206

Date: 06/06/2024

Dungapuro Place:

Signature

Name of External Examiner:

Date: 0-7/06/2024

Place:







# FORMULATION AND EVALUATION OF METFORMIN HYDROCHLORIDE LOADED FLOATING MICROSPHERE CONTAINING PERMEATION ENHANCERS

Submitted by SANJOY KUMAR BASU

University Regn. No. -221892310034 of 2022-23 Roll No. - 18920322010

> Under the guidance of Dr. Falguni Patra Associate Professor, Pharmaceutics

In partial fulfilment of the Requirement for the Degree of Master of Pharmacy in Pharmaceutics

Submitted to

Maulana Abul Kalam Azad University of Technology West Bengal

Dr. B. C. Roy College of Pharmacy and Allied Health Sciences Durgapur 713206

Academic Year: 2023 - 2024



declare that the Project entitled "FORMULATION AND 1 hereby EVALUATION OF METFORMIN HYDROCHLORIDE LOADED FLOATING MICROSPHERE CONTAINING PERMEATION ENHANCERS" in partial fulfilment of the requirement for the award of Master of Pharmacy submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is an authentic record of bona fide work carried out by me under the guidance of DR. FALGUNI PATRA.

The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University / Institution.

Sanjoy kumar Basu Signature

Name of Candidate: Sanjoy kumar Basu

Roll No: 18920322010

Date: 06.06.24

Place: bwignour





This is to certify that the Project entitled "FORMULATION AND EVALUATION OF METFORMIN HYDROCHLORIDE LOADED FLOATING MICROSPHERE CONTAINING PERMEATION ENHANCERS" by Sanjoy Kumar Basu in partial (PHARMACEUTICS) under fulfilment for the MASTER OF PHARMACY MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither this thesis nor any part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examination MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY for assessment.

Sept ou

Signature of Guide

Name of Guide: FALGUNI PATRA

Place: Date:

PROPUSAMIR KUMAR

SAMANTA (PRINCIPAL) Prof. (Dr.) Samir Kumar Samanta M. Pharm., Ph.D (J.U.) Principal

Dr. B. C. Roy College of Pharmacy & AHS Durgapur, West Bengal-713206

Place:

Date:







# EXPLORING THE SYNTHESIS, CHARACTERIZATION AND BIOLOGICAL INTERACTIONS OF QUERCETIN-COPPER NANOPARTICLE COMPLEXES FOR ENHANCED ANTIBACTERIAL AND DNA BINDING **APPLICATIONS**

Submitted by

#### SANJUKTA DAS

University Regn. No. - 221892310049 of 2022-23 Roll No. - 18920222005

Under the guidance of

Dr. Sagarika Deepthy Tallapragada

Assistant Professor Department of Pharmacology

In partial fulfilment of the Requirement for the Degree of Master of Pharmacy in Pharmacology

Submitted to

Maulana Abul Kalam Azad University of Technology **West Bengal** 

Dr. B. C. Roy College of Pharmacy and Allied Health Scie

Durgapur 713206

cademic Year: 2023 - 2024

I am hereby declared that the Project entitled "Exploring the Synthesis, Characterization and Biological Interactions of Quercetin-Copper Nanoparticle Complexes for Enhanced Antibacterial and DNA Binding Applications" in partial fulfilment of the requirement for the award of Master of Pharmacy submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is an authentic record of bonafide work carried out by me under the guidance of Dr. Sagarika Deepthy Tallapragada.

The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University / Institution.

Sanjulta Das Signature

Name of Candidate: Sanjukta Das

Roll No: 18920222005

Date: 06.06.2024

Place: Dwgapwr



This is to certify that the Project entitled "Exploring the Synthesis, Characterization and Biological Interactions of Quercetin-Copper Nanoparticle Complexes for Enhanced Antibacterial and DNA Binding Applications" by Sanjukta Das in partial fulfilment for the MASTER OF PHARMACY (PHARMACOLOGY) under MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither her thesis nor any part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examination MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY for assessment.

Dr.T. Sagarika Deepthy 06/06/24

Signature of Guide

Name of Guide: Dr. Sagarika Deepthy Tallapragada

Date: 06.06.2024

Place: Dwgapwi

PROF (DR.) SAMIR KR. SAMANTAprof. (Dr.) Samir Kumar Samanta M. Pharm., Ph.D (J.U.) Principal (PRINCIPAL)

Dr. B. C. Roy College of Pharmacy & AHS Durgapur, West Bengal-713206

Date:

Place:

Signature

Name of External Examiner:

Date:

Place:



Kumar Samanta Pharm., Ph.D (J.U.) Principal West Bengal-7/3206

Pr. Sagarika Pcepthy Tallapragada

M. Pharm., Ph.D Assistant Professor Department of Pharmacology Dr. B. C. Roy College of Pharmacy & AHS

Durgapur-713206





Synthesis of ciprofloxacin/cinnamic acid conjugates, their characterization and analytical method development by RP-HPLC

Submitted by

Satyajit Roy

University Regn. No.: 221892310017

Roll No.: 18920722013

Under the guidance of

Dr. Ujjwal Sahoo Associate professor, BCRCP

In partial fulfilment of the Requirement for the Degree of

Master of Pharmacy in Pharmaceutical Analysis

Submitted to

Maulana Abul Kalam Azad University of Technology West Bengal

Rharmacy and Allied Health Sciences Durgapur Dr. B. C. Ro cademic Year: 2023-2024

Declaration

## DECLARATION

I hereby declare that the Project entitled "Synthesis of ciprofloxacin/ cinnamic acid conjugates, there characterization and analytical method development by RP-HPLC protocoln in partial fulfilment of the requirement for the award of Master of Pharmacy submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is an authentic record of bona fide work carried out by me under the guidance of Dr. Ujjwal Sahoo.

The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University/Institution.

Satyaijt Ray

Signature Name of Candidate

Roll No: 18920722013

Date: 4 10 6124

Prof. (Dr.) Samir Kumar Sam. M. Pharm., Ph.D (J.U.) Principal Dr. B. C. Ray College at Pharmacy 8 AHS Durgapai, West Bengal-713206

# CHATTER ATT CERTIFICATE This is no certify that the Project entered Symbolic of expendence in electric next upines, there characterization and analytical method development by RP-HPLC protocol Supul Roy impartial fulfilment for the MASTER OF PHARMACY PHARMACEUTICAL ANALYSIS) under MAULANA ABUL KALAM AZAD INTERSITY OF TECHNOLOGY is a record of the original research work under our seperciping and up to our satisfaction. To our knowledge, neither this thesis nor any part of a submitted for any other academic award any where before. The thesis is forwarded Controller of Examination MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY for assessment Signature of the External Examiner nature of Guide of Guide; Dr. Ujjwal Sahoo 05/05/2 Prof Somir Kumar Samanta (Principal) Prof. (Dr.) Samir Kumar Samanta M. Pharm., Ph.D (J.U.) Principal Ox 8. C. Roy College of Pharmacy & ANS Durgopur, West Bengar, 71 3206 Durgapur Prot. (Dr.) M. Pharm., Ph. Dr. B. C. Roy College of Pharmacy & AHS Durgapur, West Bengal-713208





# DESIGN, DEVELOPMENT AND CHARACTERIZATION OF COLLAGEN-GUAR GUM BASED SCAFFOLDS IN TISSUE **ENGINEERING**

Submitted by

#### SAYANTAN NAG

University Regn. No. - 221892310035 of 2022-23 Roll No. -18920322007

Under the guidance of

#### Prof. (Dr.)Santanu Chakraborty

M.Pharm., PhD., FIC.

Professor, Divisional In-Charge, Division of Pharmaceutics Dr. B. C. Roy College of Pharmacy and Allied Health Sciences Durgapur 713206

In partial fulfilment of the Requirement for the Degree of Master of Pharmacy in Pharmaceutics

Submitted to

MaulanaAbulKalam Azad University of Technology West Bengal

Dr. B. C. Roy College of Pharmacy and Allied Health Sciences Durgapur 713206

Academic Year: 2023 - 2024







I am hereby declared that the Project entitled "Design, Development and Characterization of Collagen-Guar gum Based Scaffolds in Tissue Engineering" in partial fulfilment of the requirement for the award of Master of Pharmacy submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is an authentic record of bona fide work carried out by me under the guidance of Prof. (Dr.) Santanu Chakraborty.

The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University / Institution.

Sayantan Nag Signature

Name of Candidate: Sayantan Nag

Roll No: 18920322007

Date:

06/06/2024

Place: Dr. B. C. Roy College of Pharmacy and Allied Health Sciences, Durgapur.



This is to certify that the Project entitled "Design, Development and Characterization of Collagen-Guar gum Based Scaffolds in Tissue Engineering" by Sayantan Nag in partial fulfilment for the MASTER OF PHARMACY (PHARMACEUTICS) under MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither his/her thesis nor any part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examination MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY for assessment.

John Chalcaberry M. Pharm., Ph.D., FIC Signature of Guide

Prof. (Dr.) Santanu Chakraborty

Dr. B. C. Roy College of Pharmacy and AHS

Name of Guide: Prof. (Dr.) Santanu Chakraborty Bidhannagar, Durgapur-713206

M.Pharm., PhD., FIC.

Professor, Divisional In-Charge, BCRCP

Date

Place: Durgapur

PROF (DR.) SAMIR KR. SAMANTA

(PRINCIPAL)

Prof. (Dr.) Samir Kumar Samanta M. Pharm., Ph.D (J.U.) Principal Principal
Dr. B. C. Roy College of Pharmacy & AHS
Durgapur, West Bengal-713206

Date:

Place: Durgapur

Signature of External Examiner

Name of External Examiner

Date:

Place: Durgapur

Page no: II





Studies on the Neurobehavioral Effects and Wound Healing Property of Human Placental Extract on Traumatic Brain Injury Using Animal Model of Zebra Fish

Submitted by

#### **SNEHA GHOSH**

University Regn. No. – 221892310050 Roll No. - 18920222003

Under the guidance of

Dr. Shyamshree S S Manna

Professor of Pharmacology

In partial fulfilment of the Requirement for the Degree of Master of Pharmacy in Pharmacology

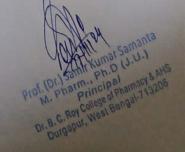
Submitted to

Maulana Abul Kalam Azad University of Technology West Bengal

Dr. B. C. Roy College of Pharmacy and Allied Health Sciences Durgapur 713206



Academic Year: 2023 - 2024



# Declaration

I hereby declare that the project entitled "Studies on the Neurobehavioral Effects and Wound Healing Property of Human Placenta Extract on Traumatic Brain Injury Using Animal Model of Zebra Fish" in partial fulfilment of the requirement for the award of Master of Pharmacy submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is an authentic record ofbona fide work carried out by me under the guidance of Prof. (Dr.) Shyamshree S S Manna.

The matter embodied in this project has not been submitted for the award of any other degree or diploma to any University / Institution.

SNEHA GHOSH

Sneha Ghosh

Roll No: 18920222003

Date: 06 • 06 •

Place: Durgapur



## Certificate

This is to certify that the Project entitled "Studies on the Neurobehavioral Effects and Wound Healing Property of Human Placenta Extract on Traumatic Brain Injury Using Animal Model of Zebra Fish" by Sneha Ghosh in partial fulfilment for the MASTER OF PHARMACY (PHARMACOLOGY) under MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY is a record of the original research work under our superusion and up to our satisfaction. To our knowledge, neither this thesis nor any part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examinaüon MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY for assessment.

/GUIDE

Dr. Shyamshree S S Manna

Place: Durgapur Date: 06/06/24

Principal

PROF. (DR.) SAMIR KUMAR SAMANTA

Dr. B. C. Roy Cc!iege of Pharmacy & AHS

Place: Durgapur, West Bengal-713206

Date: 06.06.2024

External Examiner Place: Durgapur

Date: 07.06.24





## SYNTHESIS AND CHARACTERIZATION OF LOW-METHOXY PECTIN/TAMARIND GUM-g-CAFFEIC ACID BASED FILMS AS FOOD PACKAGING MATERIALS

Submitted by

## **SOMRITA SAHA**

University Regn. No. 221892310008(2022-23) Roll No. -18921822004

> Under the guidance of Dr. Hriday Bera, Associate Professor

In partial fulfilment of the Requirement for the Degree of Master of Pharmacy in Industrial Pharmacy

Submitted to

Maulana Abul Kalam Azad University of Technology West Bengal

Dr. B. C. Roy College of Pharmacy and Allied Health Sciences Durgapur 713206

emic Year: 2023 – 2024

West Bengal-713206

I hereby declare that the Project entitled "synthesis and characterization of tamarind gum-g-caffeic acid/low-methoxy pectin based films as food packaging materials" in partial fulfilment of the requirement for the award of Master of Pharmacy submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is an authentic record of bona fide work carried out by me under the guidance of Dr. Hriday Bera.

The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University / Institution.

Signature Scho Name of Candidate: SOMRITA SAHA

Roll No: 18921822004

Date: 5/6/24

Place: Dwgofur



This is to certify that the Project entitled "synthesis and characterization of tamarind gum-g-caffeic acid/low-methoxy pectin based films as food packaging materials" by SOMRITA SAHA in partial fulfilment for the MASTER OF PHARMACY (INDUSTRIAL PHARMACY) under MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither this thesis nor any part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examination MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY for assessment.

Signature of Guide

Name of Guide: DR. HRIDAY BERA

Place: DURGIAPUR Date: 5/6/24

Examiner

Place: Date:

SAMIR KUMAR SAMANTA (PRINCIPAL)

Prof. (Dr.) Samir Kumar Samanta M. Pharm., Ph.O (J.U.) Principal Dr. B. C. Roy College of Pharmacy & AHS Durgapur, West Bengal-713206

Place:

Date:









# Synthesis of Different Coumarins to be **Evaluated against Prostate Cancer**

Submitted by

#### SOUVIK BHANDARY

University Regn. No. -221892310018 Roll No. -18920722005

Under the guidance of

Dr. Sudip Kumar Mandal

Assistant Professor

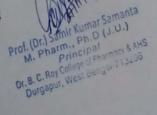
In partial fulfilment of the Requirement for the Degree of Master of Pharmacy in Pharmaceutical Analysis

Maulana Abul Kalam Azad University of Technology West Bengal

Dr. B. C. Roy College of Pharmacy and Allied Health Sciences

Durgapur 713206

Academic Year: 2023 - 2024





I hereby declare that the Project entitled "Synthesis of Different Coumarins to be Evaluated against Prostate Cancer" in partial fulfilment of the requirement for the award of Master of Pharmacy submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is an authentic record of bona fide work carried out by me under the guidance of Dr. Sudip Kumar Mandal.

The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University / Institution

Souvik Bhamdary Signature

Name of Candidate: Souvik Bhandary

Roll No: 18920722005

Date: 04.06.2024

Place: Durgapur



This is to certify that the Project entitled "Synthesis of Different Coumarins to be Evaluated against Prostate Cancer" by Souvik Bhandary in partial fulfilment for the MASTER OF PHARMACY IN PHARMACEUTICAL ANALYSIS under MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither this thesis nor any part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examination MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY for assessment.

Signature of Guide

Examiner

Name of Guide:

DR. SUDIP KUMAR MANDAL

Date:

Place:

Date: 05/06/24

PROF (DR.) SAMIR KR. SAMANTA

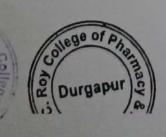
(PRINCIPAL)

Date:

Prof. (Dr.) Samir Kumar Samanta M. Pharm., Ph.D (J.U.) Principal Dr. B. C. Roy College of Pharmacy & AHS

Durgapur, West Bengal-713206

Place





### A Project Report on



# SYNTHESIS AND CHARACTERIZATION OF NOVEL CINNAMIC ACID AMIDE DERIVATIVES ACTING AS POTENTIAL ANI-DIABETIC AGENTS

Submitted by

### SRIJITA CHATTERJEE

**University Regn. No.** – 221892310019 of 2022-23 **Roll No.** - 18920722001

Under the guidance of

Dr. Parthasarathi Panda

Assistant Professor, Department of Pharmaceutical Chemistry

In partial fulfilment of the Requirement for the Degree of
Master of Pharmacy in Pharmaceutical Analysis

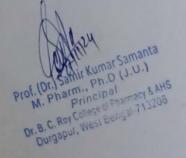
Submitted to

Maulana Abul Kalam Azad University of Technology West Bengal

Dr. B. C. Roy College of Pharmacy and Allied Health Sciences
Durgapur 713206

Academic Year: 2023 - 2024







I am hereby declared that the Project entitled "Synthesis and Characterization of Novel Cinnamic Acid Amide Derivatives acting As Potential Ani-Diabetic Agents" in partial fulfilment of the requirement for the award of Master of Pharmacy submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is an authentic record of bona fide work carried out by me under the guidance of Dr. Parthasarathi Panda.

The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University / Institution.

Svijta Chatterjee

Signature

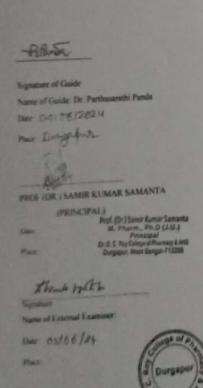
Name of Candidate: Srijita Chatterjee

Roll No: 18920722001

Dute: 04/06/24 Place: Durgapur



This is to certify that the Project entitled "Synthesis and Characterization of Novel Cinnamic Acid Amide Derivatives acting As Potential Ani-Diabetic Agents" by Srijita Chatterjee in partial fulfilment for the MASTER OF PHARMACY (PHARMACEUTICAL ANALYSIS) under MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither his/her thesis nor any part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examination MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY for assessment.







## A Project Report on



## Formulation, optimization and characterization of Albendazole loaded liposomes for targeting parenchymal brain cysticercosis

Submitted by

### SUMAN KONAR

University Regn. No.: 221892310036 Roll No.: 18920322005

Under the guidance of MR. INDRAJIT CHAND Assistant professor, BCRCP

In partial fulfillment of the Requirement for the Degree of Master of Pharmacy in Pharmaceutics Submitted to

Maulana Abul Kalam Azad University of Technology, West Bengal

Dr. B. C. Roy College of Pharmacy and Allied Health Sciences Durgapur-713206 Academic Year: 2023-2024



imar Samanta D (J.U.) armacy & AHS

al-713206

I hereby declare that the Project entitled "Formulation, optimization and characterization of Albendazole loaded liposomes for targeting of parenchymal brain cysticercosis" in partial fulfillment of the requirement for the award of Master of Pharmacy submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is an authentic record of bona fide work carried out by me under the guidance of Mr. Indrajit Chand.

The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University/Institution.

Suman Konay

Signature

Name of Candidate: SUMAN KONAR

Roll No: 1890322005

Date: 06.06.2024

Place: DURGAPUR



Prof. (Dr.) Samir Kumar Samanta
Prof. (Dr.) Samir Sami

This is to certify that the Project entitled "Formulation, optimization and characterization of Albendazole loaded liposomes for targeting of parenchymal brain cysticercosis" by SUMAN KONAR in partial fulfillment for the MASTER OF PHARMACY (Pharmaceutics) under MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither this thesis nor any part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examination MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY for assessment.

Signature of Guide

Name of Guide: Mr. Indrajit Chand

Place: Durgarpur

Date: 06.06.24

Prof (Dr). Samir Kumar Samanta

(Principal)

Place:

Date:

Prof. (Dr.) Samir Kumar Samanta M. Pharm., Ph.D (J.U.) Principal

Dr. B. C. Roy College of Pharmacy & AHS

Durgapur, West Bengal-713206

Signature

Name of External Examiner:

Date:



Prof. (D

est Bengal-713206





Project Report on

## Formulation Development Studies on Oral Wafers of A Model Antidepressant Drug

Submitted by

**Abhishek Ghosh** 

University Reg. No. - 221892310024 of 2022-23 Roll No. -18920322013

Under the guidance of

Prof. Subhabrata Ray

Professor In-Charge (PG Studies & Research) In partial fulfilment of the Requirement for the Degree of Master of Pharmacy in Pharmaceutics

Submitted to

Maulana Abul Kalam Azad University of Technology West Bengal

Dr. B. C. Roy College of Pharmacy and Allied Health Sciences Durgapur 713206

Academic Year: 2023 - 2024



Dr. B. C. Roy College of Pharmacy & All Durgapur, West Bengal-713206

### Declaration

I hereby declare that the Synopsis entitled "Formulation Development Studies on Oral Wafers of A Model Antidepressant Drug" in partial fulfilment of the requirement for the award of Master of Pharmacy submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is an authentic record of bona fide work carried out by me under the guidance of Prof. Subhabrata Ray

The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University / Institution.

Signature

Name of Candidate: Abhishek Ghosh

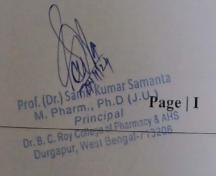
Roll No: 18920322013

Abhirhex Ghash

Date: 05/06/2024

Place: Durgapur





This is to certify that the Synopsis entitled "Formulation Development Studies on Oral Wafers of A Model Antidepressant Drug" by Abhishek Ghosh in partial fulfilment for the MASTER OF PHARMACY IN PHARMACEUTICS under MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither this thesis nor any part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examination MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY for assessment.



Signature of Guide

Name of Guide:

PROF. SUBHABRATA RAY

Place: Durgapur

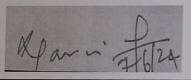
Date: 05.06.24 Professor Dr. B. C. Roy College of Pharmacy and AHS

Durgapur-713206

PROF. SAMIR KUMAR SAMANTA

(PRINCIPAL)

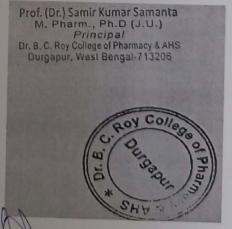
Place: Durgapur Date: 05/06/2024



Signature of the External

Examiner

Place: Durgapur Date: 05/06/2024



Page | II

Prof. (Dr.) Samir Kumar Samanta M. Pharm., Ph.D (J.U.) Dr. B. C. Roy College of Pharmacy & AHS Durgapur, West Bengal-713206 Principal







Project Report on

# EXTRACTION AND CHARACTERIZATION OF NATURAL POLYMER AND ITS IMPLICATION AS RELEASE RETARDANT FOR MICROSPHERIC **DRUG DELIVERY**

Submitted by ADARSHA DUTTA

University Regn. No. -221892310001 of 2022-23 Roll No. - 18921822001

Under the guidance of

PROF. (DR.) SANTANU CHAKRABORTY M Pharm., Ph.D. FIC **Professor and Divisional In-charge of Pharmaceutics** 

In partial fulfilment of the Requirement for the Degree of Master of Pharmacy in Industrial Pharmacy

Submitted to

Maulana Abul Kalam Azad University of Technology West Bengal

Dr. B. C. Roy College of Pharmacy and Allied, Health Sciences Durgapur 713206

Academic Year: 2023 - 2024

I hereby declare that the Project entitled "Extraction and characterization of natural polymer and its implication as release retardant for microspheric drug delivery" in partial fulfilment of the requirement for the award of Master of Pharmacy submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is an authentic record of bona fide work carried out by me under the guidance of Prof. (Dr.) Santanu Chakraborty.

The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University / Institution.

Adarsha Dutta

Name of Candidate: Adarsha Dutta

Roll No:: 18921822001

Date: 05/06/29

Place: Dr. B. C. Roy College of Pharmacy And Allied Health Sciences (Durgapur)





This is to certify that the Project entitled "Extraction and characterization of natural polymer and its implication as release retardant for microspheric drug delivery" by Adarsha Dutta in partial fulfilment for the MASTER OF PHARMACY (INDUSTRIAL PHARMACY) under MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither this thesis nor any part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examination MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY for assessment.

Gamlemu Chalorenbarky 05/06/24

Signature of Guide

Name of Guide: Prof. (Dr.) Santanu Chakraborty

Prof. (Dr.) Santanu Chakraborty

Date:

M. Pharm., Ph.D., FIC

DIC, Pharmaceutics Division Place

Dr. B. C. Roy College of Pharmacy and AHS

Bidhannagar, Durgapur-713206

PROF (DR.) SAMIR KR. SAMANTA

(PRINCIPAL)

Prof. (Dr.) Samir Kumar Samanta M. Pharm., Ph.D (J.U.) Principal

Dr. B. C. Roy College of Pharmacy & AHS Durgapur, West Bengal-713206

Place:

Date:

Signature

Name of External Examiner

Place





Project Report on

## CAFFEIC ACID-g-GUAR GUM/FISH COLLAGEN BASED HYDROGELS AS WOUND DRESSINGS

Submitted by

### AKASH MONDAL

University Regn. No. 221892310025 (2022-23) Roll No. -18920322002

> Under the guidance of Dr. Hriday Bera Associate Professor

In partial fulfillment of the Requirement for the Degree of Master of Pharmacy in Pharmaceutics

Submitted to

Maulana Abul Kalam Azad University of Technology West Bengal

Dr. B. C. Roy College of Pharmacy and Allied Health Sciences Durgapur 713206

Academic Year: 2023 - 2024



Prof. (Dr.) Samir Kumar Samanta M. Pharm., Ph.D (J.U.) Dr. B. C. Roy College of Pharmacy & AHS Durgapur, West Bengal-713206



I hereby declare that the Project entitled "CAFFEIC ACID-g-GUAR GUM/FISH COLLAGEN BASED WOUND HYDROGELS AS DRESSINGS" in partial fulfilment of the requirement for the award of Master of Pharmacy submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is an authentic record of bona fide work carried out by me under the guidance of Dr. Hriday Bera.

The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University / Institution.

Akash Mondal Signature

Name of Candidate: AKASH MONDAL

Roll No: 18920322002

Date: 06/06/2021

Place: DURGAPUR





This is to certify that the Project entitled "CAFFEIC ACID-g-GUAR GUM/FISH COLLAGEN BASED HYDROGELS AS WOUND DRESSINGS" by AKASH MONDAL in partial fulfillment for the MASTER OF PHARMACY (PHARMACEUTICS/PHARMACOLOGY) under MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither this thesis nor any part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examination MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY for assessment.

Signature of Guide

Name of Guide: DR, HRIDAY BERA

Place: DURGAPUR Date: 06/06/2024 Place: DURGAPUR

Examiner

Date:

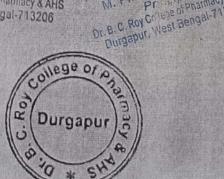
PROF. SAMIR KUMAR SAMANTA (PRINCIPAL)

Place: DURGAPUR

Date:

Prof. (Dr.) Samir Kumar Samanta M. Pharm., Ph.D (J.U.) Principal Dr. B. C. Roy College of Pharmacy & AHS

Durgapur, West Bengal-713206





A

Project Report on



## DEVELOPMENT AND EVALUATION OF MICROEMULSION GEL FORMULATION CONTAINING BOSWELLIA SERRATA EXTRACT

Submitted by

### ANANYA DEY

University Regn. No. - 221892310026 OF 2022-23 Roll No. -18920322009

Under the guidance of

Dr. Falguni Patra

Associate Professor, Pharmaceutics

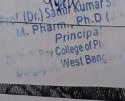
In partial fulfilment of the Requirement for the Degree of Master of Pharmacy in Pharmaceutics

Submitted to

Maulana Abul Kalam Azad University of Technology West Bengal

Dr. B. C. Roy College of Pharmacy and Allied Health Sciences Durgapur 713206

Academic Year: 2023 - 2024



I am hereby declared that the Project entitled "Development and Evaluation of microemulsion gel formulation containing Boswellia serrata extract" in partial fulfilment of the requirement for the award of Master of Pharmacy submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is an authentic record of bona fide work carried out by me under the guidance of Dr. Falguni Patra.

The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University / Institution.

Ananya Dey Signature

Name of Candidate: Ananya Dey

Roll No: 18920322009

Date: 06/06/2024

Place: Dr. B. C. Roy College of Pharmacy and Allied Health Sciences, Durgapur.



This is to certify that the Project entitled "Development and evaluation of microemulsion gel formulation containing Boswellia serrata extract" by Ananya Dey in partial fulfilment for the MASTER OF PHARMACY (PHARMACEUTICS) under MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither his/her thesis nor any part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examination MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY for assessment.

Signature of Guide

Name of Guide: Dr. Falguni Patra

Associate Professor, Pharmaceutics

06/06/2024

Place: Durgapur

PROF (DR.) SAMIR KR. SAMANTAprof. (Dr.) Samir Kumar Samanta M. Pharm., Ph.D (J.U.)

(PRINCIPAL)

Principal
Dr. B. C. Roy College of Pharmacy & AHS
Durgapur, West Bengal-713206

Date:

Place: Durgapur

Signature of External Examiner

Name of External Examiner:

Date:

Place: Durgapur





Mede of





A Project Report on

# "FORMULATION AND CHARACTERIZATION OF ELLAGIC ACID LOADED SILVER NANOPARTICLES"

Submitted by

### ANUPAM BERA

University Regn. No. –221892310027 of 2022-23 Roll No. -18920322001

Under the guidance of

Mrs. Rituparna Chaki Ghosh

(Assistant Professor, Department of Pharmaceutics)

In partial fulfilment of the Requirement for the Degree of

Master of Pharmacy in Pharmaceutics

Submitted to

Maulana Abul Kalam Azad University of Technology West Bengal

Dr. B. C. Roy College of Pharmacy and Allied Health Sciences
Durgapur 713206

Academic Year: 2023 - 2024



"FORMULATION AND hereby declare that the Project entitled CHARACTERIZATION SILVER OF LOADED ELLAGIC ACID NANOPARTICLES" in partial fulfilment of the requirement for the award of Master of Pharmacy submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is an authentic record of bona fide work carried out by me under the guidance of Mrs. Rituparna Chaki Ghosh. The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University / Institution.

Anupam Bera.

Signature

Name of Candidate: ANUPAM BERA

Roll No: 18920322001

Date: 06/06/24
Place: Durgapur



"FORMULATION AND to certify that the Project entitled SILVER LOADED CHARACTERIZATION **ACID** OF **ELLAGIC** NANOPARTICLES" by ANUPAM BERA in partial fulfilment for the MASTER OF PHARMACY (PHARMACEUTICS) under MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither this thesis nor any part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examination MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY for assessment.

Signature of the Exter Examiner

Name of Guide: Mrs. Rituparna chaki Gibosh

Place: Durgapur 06/06/24

Name of External Examiner:

Place: Date:

PROP (OR!) SAMIR KUMAR

SAMANTA (PRINCIPAL) Prof. (Dr.) Samir Kumar Samanta M. Pharm., Ph.D (J.U.) Principal Dr.B. C. Roy College of Pharmacy & AHS Durgapur, West Bengal-713206

Place: Date:









## Project Report on FORMULATION AND CHARACTERIZATION OF NICOTINAMIDE AND OFLOXACIN LOADED FILMS FOR WOUND HEALING

Submitted by

### ANUSKA CHATTERJEE

UNIVERSITY REGISTRATION NO. -221892310028 (2022-2023)

ROLL NO. - 18920322008

Under the guidance of

Mr. Saptarshi Dutta

Assistant Professor, Pharmaceutics

In partial fulfilment of the Requirement for the Degree of

Master of Pharmacy in Pharmaceutics

Submitted to

Maulana Abul Kalam Azad University of Technology West Bengal

Dr. B. C. Roy College of Pharmacy and Allied Health Sciences Durgapur 713206

Academic Year: 2023 - 2024





I hereby declare that the Project entitled "Formulation and Characterization of Nicotinamide and Offoxacin loaded films for wound healing" in partial fulfilment of the requirement for the award of Master of Pharmacy submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is an authentic record of bona fide work carried out by me under the guidance of Mr. Saptarshi Dutta.

The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University / Institution.

Anuska Chatterrjee Signature

Name of Candidate: ANUSKA CHATTERJEE

Roll No: 18920322008

Date: 06/06/2024

Place: DURGAPUR

This is to certify that the Project entitled "Formulation and Characterization of Accomamide and Offoxacin loaded films for wound healing " by Anuska Chatterjee in partial fulfilment for the MASTER OF PHARMACY (PHARMACEUTICS) under MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither this thesis nor any part of it has been submitted for any other scademic award anywhere before. The thesis is forwarded to Controller of Examination MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY for assessment.

Marshi &

Name of Guide: Mr. Saptarshi Dutta

Place: DURGAPUR Date: 06/06/2024.

Examiner

Place: Date:

MIR KUMAR SAMANTAprof. (Dr.) Samir Kumar Samanta M. Pharm., Ph.D (J.U.) (PRINCIPAL) Principal

Place: Date:

Dr. B. C. Roy College of Pharmacy & AHS Durgapur, West Bengal-713206





Project Report On

Immobilization of Plastic Degrading Microorganism on Polymeric Nanoparticle for Efficient Plastic Degradation and Byproduct Analysis

Submitted by

Arijit Patra

University Reg No.- 221892310010 Roll No.- 18920722011 Under The Guidance of Mr. Sanjoy Konar

Assistant Professor

In partial fulfilment of the Requirement for the Degree of Master of Pharmacy in Pharmaceutical Analysis

Submitted to

Maulana Abul Kalam Azad University of Technology West Bengal

Dr. B. C. Roy College of Pharmacy and Allied Health Sciences Durgapur 713206 Academic Year: 2023 - 2024



Principal

Dr. B. C. Roy College of Pharmacy & AHS

Durgapur, West Bengal-713266



# LARATION

I hereby declare that the Project entitled "Immobilization of Plastic Degrading Microorganism on Polymeric Nanoparticle for Efficient Plastic Degradation and Byproduct Analysis" in partial fulfillment of the requirement for the award of Master of Pharmacy submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is an authentic record of bonafide work carried out by me under the guidance of Mr. Sanjoy Konar.

The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University / Institution.

Aright Patra

Name of Candidate: Arijit Patra

Roll No: 189207 220 11

Date: 04/06/2029
Place: Dwgapwy.



his is to certify that the Project entitled "Immobilization of Plastic Degrading Microorganism on Polymeric Nanoparticle for Efficient Plastic Degradation and Byproduct Analysis" by Arijit Patra in partial fulfilment for the MASTER OF PHARMACY (PHARMACEUTICAL ANALYSIS) under MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither this thesis nor any part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examination MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY for assessment.

> Prof. (Dr.) Samir Kumar Samanta M. Pharm., Ph.D (J.U.)

Principal Dr. B. C. Roy College of Pharmacy & AHS Durgapur, West Bengal-713206

Signature of Guide

Name of Guide: SANJOY KONAR

Place: DURGAPUR

PROF (DR.) SAMIR KR. SAMANTA

Trulo poth

(PRINCIPAL)

Place: DURGAPUR

Signature

Name of External Examiner:

05/06/24



Durgapur, West Bengal-713200





# Project report on

### IMPROVEMENT OF THE PHARMACOKINETIC PROFILE OF CURCUMIN LOADED NANOCOCHLEATES USING NANO-LIPOIDAL TECHNOLOGY

Submitted by Arijit Sau

University Regn. No.-221892310029(2022-23) Roll No. - 18920322015

> Under the guidance of Mr. SAGAR SENGUPTA Associate Professor, BCRCP

Submitted to In partial fulfilment of the Requirement for the Degree of Master of Pharmacy in Pharmaceutics

Maulana Abul Kalam Azad University of **Technology West Bengal** 

Dr. B.C. Roy College of Pharmacy and Allied Health Sciences Durgapur 713206

AcademicYear:2023-2024



Kumar Samanta Prof. (Dr. Ksemir Kumar Saman M. Pharm., Ph.D (J.U.) Durgapur, Wesl Bengal-713206 Dr. B. C. Roy College of F



I hereby declare that the Project entitled "Improvement of the Pharmacokinetic Profile of Curcumin-Loaded Nanocochleates Using Nano-Lipoidal Technology". in partial fulfilment of the requirement for the award of Master of Pharmacy submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is an authentic record of bona fide work carried out by me under the guidance of Mr. SAGAR SENGUPTA.

The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University / Institution.

Name of Candidate: -Arijit Sau

Roll No: - 18920322015

Date: 05/06/24

Place: - Durgapur.

This is to certify that the Project entitled "Improvement of the Pharmacokinetic Profile of Curcumin-Loaded Nanocochleates Using Nano-Lipoidal Technology" by Arijit Sau in partial fulfilment for the MASTER OF PHARMACY (PHARMACEUTICS)under MAULANA ABULKALAM AZAD UNIVERSITY OF TECHNOLOGY is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither this thesis nor any part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examination MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WEST BENGAL for assessment.

and ango hom

Signature of Guide Name of

Guide: Mr. Sagar Sengupta

Place: Durgapur

Date:

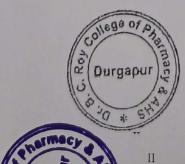
Associate Professor Dr. B. C. Roy College of Pharmacy and AHS Dyrgapur-713206

PROF. SAMTRKUMARSAMANTA (PRINCIPAL)

Place: Durgapur

Date:

Prof. (Dr.) Samir Kumar Samanta M. Pharm., Ph.D (J.U.) Principal
Dr. B. C. Roy College of Pharmacy & AHS Durgapur, West Bengal-713206



Signature of the External Examine

Date:





# Project report on

### IMPROVEMENT OF THE PHARMACOKINETIC PROFILE OF CURCUMIN LOADED NANOCOCHLEATES USING NANO-LIPOIDAL TECHNOLOGY

Submitted by Arijit Sau

University Regn. No.-221892310029(2022-23) Roll No. - 18920322015

> Under the guidance of Mr. SAGAR SENGUPTA Associate Professor, BCRCP

Submitted to In partial fulfilment of the Requirement for the Degree of Master of Pharmacy in Pharmaceutics

Maulana Abul Kalam Azad University of **Technology West Bengal** 

Dr. B.C. Roy College of Pharmacy and Allied Health Sciences Durgapur 713206

AcademicYear:2023-2024



Kumar Samanta Prof. (Dr. Ksemir Kumar Saman M. Pharm., Ph.D (J.U.) Durgapur, Wesl Bengal-713206 Dr. B. C. Roy College of F



I hereby declare that the Project entitled "Improvement of the Pharmacokinetic Profile of Curcumin-Loaded Nanocochleates Using Nano-Lipoidal Technology". in partial fulfilment of the requirement for the award of Master of Pharmacy submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is an authentic record of bona fide work carried out by me under the guidance of Mr. SAGAR SENGUPTA.

The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University / Institution.

Name of Candidate: -Arijit Sau

Roll No: - 18920322015

Date: 05/06/24

Place: - Durgapur.

This is to certify that the Project entitled "Improvement of the Pharmacokinetic Profile of Curcumin-Loaded Nanocochleates Using Nano-Lipoidal Technology" by Arijit Sau in partial fulfilment for the MASTER OF PHARMACY (PHARMACEUTICS)under MAULANA ABULKALAM AZAD UNIVERSITY OF TECHNOLOGY is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither this thesis nor any part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examination MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WEST BENGAL for assessment.

and ango hom

Signature of Guide Name of

Guide: Mr. Sagar Sengupta

Place: Durgapur

Date:

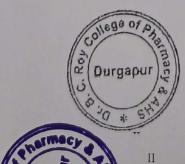
Associate Professor Dr. B. C. Roy College of Pharmacy and AHS Dyrgapur-713206

PROF. SAMTRKUMARSAMANTA (PRINCIPAL)

Place: Durgapur

Date:

Prof. (Dr.) Samir Kumar Samanta M. Pharm., Ph.D (J.U.) Principal
Dr. B. C. Roy College of Pharmacy & AHS Durgapur, West Bengal-713206



Signature of the External Examine

Date:



# Project Report on



# Evaluation of Anti-Ulcer Activity of Barleria lupulina Leaves

Submitted by

### **ARINDAM SAHOO**

University Regn. No. - 221892310039 OF 2022-23 Roll No. - 18920222007

Under the guidance of PROF. SAMIR KUMAR SAMANTA **PRINCIPAL** of Dr. B. C. Roy College of Pharmacy and Allied Health Sciences

In partial fulfilment of the Requirement for the Degree of Master of Pharmacy in Pharmacology

Submitted to Maulana Abul Kalam Azad University of Technology, West Bengal

Dr. B. C. Roy College of Pharmacy and Allied Health Sciences Durgapur, 713206

Academic Year: 2023 - 2024



I am hereby declared that the Project entitled "Evaluation of Anti-Ulcer Activity of Barleria lupulina Leaves" in partial fulfilment of the requirement for the award of Master of Pharmacy submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is an authentic record of bonafide work carried out by me under the guidance of PROF. SAMIR KUMAR SAMANTA

The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University / Institution.

Arindam Schoo Signature

Name of Candidate: Arindam Sahoo

Roll No: 18920222007

Date: 06/06/2024

Place: Durgapur



This is to certify that the Project entitled "Evaluation of Anti-Ulcer Activity of Barleria lupulina Leaves" by Arindam Sahoo in partial fulfilment for the MASTER OF KALAM ABUL MAULANA PHARMACY (PHARMACOLOGY) under AZAD UNIVERSITY OF TECHNOLOGY, is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither his thesis nor any part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examination MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY for assessment.

Name of Guide:

Date:

Place:

PROF (DR.) SAMIR KR. SAMANTA

(PRINCIPAL)

Date:

Place:

Prof. (Dr.) Samir Kumar Samanta M. Pharm., Ph.D (J.U.) Principal Dr. B. C. Roy College of Pharmacy & AHS Durgapur, West Bengal-713206

Signature

Name of External Examiner:

Date:

Place:

ii



MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WEST BENGAL

Project Report on

"Synthesis and characterization of different amino acid derivatives to be evaluated against non-alcoholic fatty liver disease".

Submitted by

# **Arup Koley**

University Regn. No. -221892310011 Roll No. -18920722002

Under the guidance of

Dr. Amit Kumar Halder

Associate Professor

In partial fulfilment of the Requirement for the Degree of Master of Pharmacy in Pharmaceutical Analysis

Submitted to

Maulana Abul Kalam Azad University of Technology West Bengal

Dr. B. C. Roy College of Pharmacy and Allied Health Sciences Durgapur 713206

Academic Year: 2023



Ph.D (J.U.) Dr. B. C. Roy College of Pharmack & Mr.S. Durgapur, West Benga

I hereby declare that the Project entitled "Synthesis and characterization of different amino acid derivatives to be evaluated against non-alcoholic fatty liver disease". in partial fulfilment of the requirement for the award of Master of Pharmacy submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is an authentic record of bona fide work carried out by me under the guidance of Dr. Amit Kumar Halder.

The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University / Institution.

Aus Koley Signature

Name of Candidate: - Arup Koley

Roll No: -18920722002

Date: -05.06.2024

Place: - Durgapur



This is to certify that the Project entitled "Synthesis and characterization of different amino acid derivatives to be evaluated against non-alcoholic fatty liver disease" by Arup koley in partial fulfilment for the MASTER OF PHARMACY (PHARMACEUTICAL ANALYSIS) under MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither this thesis nor any part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examination MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY for assessment.

Arrid Kumon Halder

DR. AMIT KUMAR HALDER ASSOCIATE PROFESSOR DR. B. C OY COLLEGE OF PHARMACY AND A.H.S. DURGAPUR-713206

Signature of Guide

Name of Guide: Dr. Amit Kumar Halder

Date: 04.06.2024

Place: Durgapur

PROF (DR.) SAMIR KR. SAMANTA

(PRINCIPAL)

Date: 04.06.2024

Place: Durgapur

Prof. (Dr.) Samir Kumar Samanta M. Pharm., Ph.D (J.U.) Principal

Dr. B. C. Roy College of Pharmacy & AHS Durgapur, West Bengal-713206

Signature Proto Sin

Name of External Examiner: of P/

Date: 106 /24

Place: Durgapur

ir Samanta West Bengal-71320





Project Report On

Immobilization of Plastic Degrading Microorganism on Polymeric Nanoparticle for Efficient Plastic Degradation and Virulence Study of Microorganism on Animal Model

Submitted by

# **AYAN MAHATA**

University Reg No.- 221892310040 of 2022-2023

Roll No.- 18920222012

Under The Guidance of

Dr. Abhik Si

Associate Professor

Department of Pharmacology

In partial fulfilment of the Requirement for the Degree of

Master of Pharmacy in Pharmacology

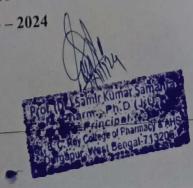
Submitted to

# Maulana Abul Kalam Azad University of Technology West Bengal

Dr. B. C. Roy College of Pharmacy and Allied Health Sciences Durgapur 713206

Academic Year: 2023 - 2024





I bereby declare that the Project entitled "Immobilization of Plastic Degrading Microorganism on Polymeric Nanoparticle for Efficient Plastic Degradation and Virulence Study of Microorganism on Animal Model" in partial fulfilment of the requirement for the award of Master of Pharmacy submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is an authentic record of bonafide work carried out by me under the guidance of Dr. Abhik

The matter embodied in this Project has not been submitted for the award of any other degree or diploma to anyUniversity / Institution.

Signature

Name of Candidate: AYAN MAHATA

Ayon Mahata

Roll No: 18920222012

Date: 06/06/2024

Place: BCRCP, Durgopuz





This is to certify that the Project entitled "Immobilization of Plastic Degrading Microorganism on Polymeric Nanoparticle for Efficient Plastic Degradation and Virulence Study of Microorganism on Animal Model" by Ayan Mahata in partial fulfilment for the MASTER OF PHARMACY (PHARMACOLOGY) under MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither this thesis nor any part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examination MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY for assessment.

Signature of Guide

Name of Guide: Dr. Abhik Si.

Date:

06.06.2024.

Ablule.

Place:

BERCP Dusgapor.

PROF (DR.) SAMIR KR. SAMANTA

(PRINCIPAL)

Prof. (Dr.) Samir Kumar Samanta M. Pharm., Ph D (J.U.)

Date:

Principal Dr. B. C. Roy College of Frarmacy & AHS Durgapur, West Bengal-713206

Place:

Signature

Name of External Examiner:

Date:

Place:









Project Report on

# Design, Synthesis and Characterization of Different Coumarin Derivatives to be evaluated against Breast Cancer

Submitted by

## CHANCHAL MONDAL

University Regn. No. -221892310012 Roll No. -18920722009 Under the guidance of

# Dr. Amit Kumar Halder

Associate professor

In partial fulfilment of the Requirement for the Degree of Master of Pharmacy in Pharmaceutical Analysis

Maulana Abul Kalam Azad University of Technology

West Bengal

Dr. B. C. Roy College of Pharmacy and Allied Health Sciences Durgapur 713206

Academic Year: 2023 - 2024



M. Pharm., Ph.D (J.U.) Prof. (Dr.) Samir Dr. B. C. Roy College of Pharmany & AHS Durgapur, West Bengal-710206



I hereby declare that the Project entitled "Design, Synthesis and characterization of different coumarin derivatives to be evaluated against Breast Cancer" in partial fulfilment of the requirement for the award of Master of Pharmacy submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is an authentic record of bona fide work carried out by me under the guidance of Dr. Amit Kumar Halder.

The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University / Institution

Charchal Mondal

Signature

Name of Candidate: Chanchal Mondal

Roll No: 18920722009

Date: 03/06/2024

Place: Durgapur



This is to certify that the Project entitled "Design, Synthesis and characterization of different coumarin derivatives to be evaluated against Breast Cancer" by Chanchal OF PHARMACY IN MASTER Mondal in partial fulfilment for the PHARMACEUTICALS ANALYSIS under MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither this thesis nor any part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examination MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY for assessment

Signature of Guide

DR. AMIT KUMAR HALDE DR. B. C. TOY COLLEGE DURGAPUR TITOR

Name of Guide:

Date: 05 06 2024

DR. AMIT KUMAR HALDER

Muce Durgophy

Date 03 06 2024

PROF (DR.) SAMIR KR. SAMANTA

(PRINCIPAL)

Date: 03-06-24

Place burgopur

Prof. (Dr.) Samir Kumur Samunta M. Phurm., Ph.D (J.U.) Principal
Dr. S. C. Ray Calege of Plannary 4 JUS
Durgspur, West Bangal-713206



Thrulo pyth 'Sen Signature of the External

Place Durgapus

Examiner

Prot. (U.) Same Numar (J.U.)

M. Pharm.. Ph.O (J.U.)

Principal
Pr





Project Report on

# Design, Synthesis and Characterization of Different Coumarin Derivatives to be evaluated against Breast Cancer

Submitted by

## CHANCHAL MONDAL

University Regn. No. -221892310012 Roll No. -18920722009 Under the guidance of

# Dr. Amit Kumar Halder

Associate professor

In partial fulfilment of the Requirement for the Degree of Master of Pharmacy in Pharmaceutical Analysis

Maulana Abul Kalam Azad University of Technology

West Bengal

Dr. B. C. Roy College of Pharmacy and Allied Health Sciences Durgapur 713206

Academic Year: 2023 - 2024



M. Pharm., Ph.D (J.U.) Prof. (Dr.) Samir Dr. B. C. Roy College of Pharmany & AHS Durgapur, West Bengal-710206



I hereby declare that the Project entitled "Design, Synthesis and characterization of different coumarin derivatives to be evaluated against Breast Cancer" in partial fulfilment of the requirement for the award of Master of Pharmacy submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is an authentic record of bona fide work carried out by me under the guidance of Dr. Amit Kumar Halder.

The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University / Institution

Charchal Mondal

Signature

Name of Candidate: Chanchal Mondal

Roll No: 18920722009

Date: 03/06/2024

Place: Durgapur



This is to certify that the Project entitled "Design, Synthesis and characterization of different coumarin derivatives to be evaluated against Breast Cancer" by Chanchal OF PHARMACY IN MASTER Mondal in partial fulfilment for the PHARMACEUTICALS ANALYSIS under MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither this thesis nor any part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examination MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY for assessment

Signature of Guide

DR. AMIT KUMAR HALDE DR. B. C. TOY COLLEGE DURGAPUR TITOR

Name of Guide:

DR. AMIT KUMAR HALDER

Muce Durgophy

Date 03 06 2024

PROF (DR.) SAMIR KR. SAMANTA

(PRINCIPAL)

Date: 03-06-24

Place burgopur

Prof. (Dr.) Samir Kumur Samunta M. Phurm., Ph.D (J.U.) Principal
Dr. S. C. Ray Calege of Plannary 4 JUS
Durgspur, West Bangal-713206





Thrulo pyth 'Sen Signature of the External

Place Durgapus

Date: 05 06 2024

Examiner

Development and evaluation of Itraconazole loaded microemulsion gel formulation



A Project Report on



# DEVELOPMENT AND EVALUATION OF ITRACONAZOLE LOADED MICROEMULSION **GEL FORMULATION**

Submitted by

#### DIBYENDU KUNDU

University Regn. No. -221892310002 Roll No. - 18921822003

In partial fulfilment of the Requirement for the Degree of Master of Pharmacy in Industrial Pharmacy

Submitted to

Maulana Abul Kalam Azad University of Technology West Bengal

Under the guidance of

Dr. FALGUNI PATRA

Associate professor, Pharmaceutics

Dr. B. C. Roy College of Pharmacy and Allied Health Scie

Durgapur 713206

Academic Year: 2023 - 2024

#### Development and evaluation of Itraconazole loaded microemulsion gel formulation

#### **DECLARATION**

I hereby declare that the Project entitled "Development and evaluation of Itraconazole loaded microemulsion gel formulation" in partial fulfilment of the requirement for the award of Master of Pharmacy MaulanaAbulKalam Azad University of Technology, West Bengal, is an authentic record of bona fide work carried out by me under the guidance of Dr. Falguni Patra.

The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University / Institution.

Signature Kandu

Name of Candidate: DIBYENDU KUNDU

Roll No: 18921822003

Date: 05 . 06 . 2024

Place: Dwignpwi



Page 1 of 105

## Development and evaluation of Itraconazole loaded microemulsion gel formulation

#### CERTIFICATE:

This is to certify that the Project entitled "Development and evaluation of Itraconazole loaded microemulsion gel formulation "by Dibyendu Kundu in partial fulfilment for the MASTER OF PHARMACY (INDUSTRIAL PHARMACY)under MAULANA ABUL KALAM AZAD UNIVERSITYOF TECHNOLOGY is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither this thesis nor any part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examination MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY for assessment.

Signature of Guide

Name of Guide: DR. FALLOUNI PATRA

Signature of the Extern

Place: Date

IIR KUMAR

(PRINCIPALD): J Samir Kumar Samanta

Dr. B. C. Roy Princip.

M. Pharm . Ph D (J.U.)

Durgapur, West Ce Jan . 13.06

SAMANTA

Place: Date:

Page 2 of 105





## A Project report on

# Force Degradation Study of Quetiapine and its marketed tablet by Analytical and Chemical Characterizations

Submitted by

Dipanwita Bera

University Regn. No.- 221892310014 Roll No.- 18920722007

> Under the guidance of Dr. Souvik Basak Professor M. Pharm, Ph.D.

In partial fulfillment Of the requirement for award of the degree of Master of Pharmacy in Pharmaceutical Analysis

Submitted to

Maulana Abul Kalam Azad University of Technology West Bengal

Dr. B. C. Roy College of Pharmacy and Allied Health Sciences Durgapur 713206

Academic Year: 2022 - 2024



Pharm., Ph.D (J.U.) Principal West Ber 3 11.7 13206

I hereby declare that the Project entitled "Force Degradation Study of Quetiapine and its marketed tablet by Analytical and Chemical Characterizations" in partial fulfilment of the requirement for the award of Master of Pharmacy submitted to Maulana Abul Kalam Azad University of Technology, West Bengal, is an authentic record of bona fide work carried out by me under the guidance of Dr. Souvik Basak.

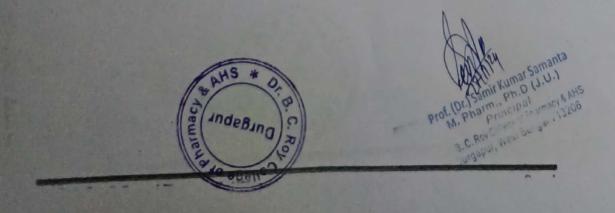
The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University / Institution.

Name of Candidate. Dipanwita Bera

Roll No. - 18920722007

Date 3/6/04

Place: Durgapur



This is to certify that the Project entitled "Force Degradation Study of Quetiapine and marketed tablet by Analytical and Chemical Characterizations" by Dipanwita Bera in partial fulfilment for the MASTER OF PHARMACY (Pharmaceutical Analysis) under MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither this thesis nor any part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examination MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY for assessment.

Name of Guide: Dr. Souvik Basak

Place: Durgapur

Date:

Signature of the External

Examiner

Place: Durgapur Date: 5/6/24

PROF. SAMIR KUMAR SAMANTA

(PRINCIPAL)

Prof. (Dr.) Samir Kumar Samanta M. Pharm Fn D (J.U.) Principal Dr. B. C. Roy College Charmacy & AHS Durgapur, West Benyal-713206

Place. Durgapur

Date

